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CHARACTERISTICS OF STUDENTS RECEIVING MENTAL HEALTH SERVICES AT THE UNIVERSITY OF CAPE TOWN

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DECLARATION

I, Jeremy Peter de Beer, hereby declare that the work on which this dissertation is based is original (except where acknowledgements indicate otherwise) and that neither the whole work nor any part of it has been, is being, or is to be submitted for another degree in this or any other University.

Signed: Signed by candidate

Date: 01/04/2000

DEDICATION

To my mother, for her unfailing support and encouragement, without which it would not have been possible to initiate, continue or complete this major undertaking.

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LIST OF ABBREVIATIONS USED IN TEXT

(a) University of Cape Town student service-orientated facilities

UCT-ADP	University of Cape Town Academic Development Programme
UCT-SAD/SAF	University of Cape Town Student Affairs Department (defunct title)
UCT-SADC	University of Cape Town Student Advice and Development Centre
UCT-SDSD	University of Cape Town Student Development and Services Department
UCT-SHS	University of Cape Town Student Health Service
UCT-SHS-MHS	University of Cape Town Student Health Service Mental Health Services
UCT-UFAO	University of Cape Town Undergraduate Financial Aid Office
UCT-TMU	University of Cape Town Teaching Methods Unit (defunct facility)

(b) Hospitals

GSH	Groote Schuur Hospital
GSH Psych OPD	Groote Schuur Hospital Psychiatry Outpatients Department
VBH	Valkenberg Hospital
WSH	William Slater Hospital

LIST OF ABBREVIATIONS USED IN TABLES

(a) Gender-specific variable

M	male students
F	female students

(b) Race/population group-specific variable

A	African students
B	Black (African, Coloured and Indian) students
C	Coloured students
I	Indian students
W	White students

(c) Race/population group and gender-specific variable

AM	African male students
AF	African female students
BM	Black (African, Coloured and Indian) male students
BF	Black (African, Coloured and Indian) female students
CM	Coloured male students
CF	Coloured female students
IM	Indian male students
IF	Indian female students
WM	White male students
WF	White female students

(d) Faculty-specific variable

SS and H	Social Science and Humanities faculty students

(e) Level of study-specific variable

UG	Undergraduate students
PG	Postgraduate students

(f) Residence (home address)-specific variable

L	Locally resident students
N	Nationally resident students
I	Internationally resident (foreign) students

(g) General (found in most of above selected variables)

R (in ratio format)	Remaining subcategories of selected variable

NOTE ON HISTORICAL DISADVANTAGE

The terms historical disadvantaged and/or educationally underprepared have been used throughout this research work to refer to Black (especially African) students attending the University of Cape Town who were most severely affected by the apartheid-inspired policies of the previous regime. The candidate employs this terminology in recognition of the material disadvantage suffered by the vast majority of Black students deriving from such a background. The use of this terminology is compatible with that employed by relevant University student service-orientated departments formed to redress these past imbalances (e.g. the Academic Development Programme (UCT-ADP)). However, it has been brought to the candidate's attention that the term disadvantaged is construed by several Black students (to whom it refers) as conveying a negative stereotype which adversely affects their self-esteem and self-confidence. It has never been the intention of the candidate to promote negative stereotypes or create any negative connotation through the use of these descriptive labels. Instead the candidate has endeavored to recognize historical discrepancies that still exist between the different race/population groups and strives, through, inter alia, the results detailed in Chapter 5 and the specific recommendations outlined in Chapter 6 of this study, to facilitate the transformation process that is currently affecting the University of Cape Town. The allied topic of race-based research is discussed, in some depth, in section 1.5.

ABSTRACT

Name: Jeremy Peter de Beer
Address: Department of Psychiatry, University of Cape Town, Private Bag, Rondebosch, 7700, Republic of South Africa.
Title: Characteristics of students receiving mental health services at the University of Cape Town.
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Objectives: (i) to describe students presenting at the UCT-SHS-MHS; (ii) to compare students presenting at the UCT-SHS-MHS with students presenting at the UCT-SHS who do NOT present at the UCT-SHS-MHS (controls); (iii) to compare students presenting at the UCT-SHS-MHS with all other students attending the University of Cape Town, and (iv) to examine the association between the number of consultations at the UCT-SHS-MHS. They are described in terms of selected demographic, academic, residential (home address), financial assistance and, where appropriate, clinical (diagnostic) variables:

Design: The study, which utilised official University of Cape Town student records, was descriptive in nature for Objective 1 and analytic in nature for Objective 2 (case-control study), Objective 3 (cross-sectional study) and Objective 4.

Samples: 932 patients, 1 924 matched controls and 23 158 registered students.

Results: (i) Objective 1 (attendees) – minority groups such as Blacks (Africans, Coloureds and Indians), non-traditionally aged students, non-English first language speaking students, out-of-town students and socio-economically disadvantaged students form a sizeable proportion of UCT-SHS-MHS attendees; (ii) Objective 2 (patients versus controls) – non-minority groups such as English first language speaking students (rather than the minority groups reported in Objective 1) utilise the UCT-SHS-MHS significantly more than the UCT-SHS; (iii) Objective 3 (patients versus the total student community) – minority groups such as Blacks (Africans, Coloureds and Indians), non-English first language speaking students, out-of-town students and socio-economically disadvantaged students are significantly overrepresented amongst UCT-SHS-MHS attendees, and (iv) Objective 4 (number of consultations) – non-minority groups such as White students (rather than the minority groups reported in Objective 3) are responsible for the highest mean number of consultations at the UCT-SHS-MHS.

Conclusion: (i) Objective 1 (attendees) – these results are largely related to the composition of the total student community although notable exceptions include female students, first year students and students whose home address is outside metropolitan Cape Town; (ii) Objective 2 (patients versus controls) – male students, non-English first language speaking students, non-Arts, Music and Social Science and Humanities faculty students and students residing outside metropolitan Cape Town are either particularly unaware or extremely unsure of the potential benefits to be derived from the psychotherapeutic process; (iii) Objective 3 (patients versus the total student community) – the usage/utilisation rate is largely related to either background cultural and socio-economic factors or academic-related concerns that affect students (e.g. race/population group, language and financial assistance can be closely interlinked and may relate to the set of adverse family and financial circumstances that could promote the development of mental disorders), and (iv) Objective 4 (number of consultations) – these results are largely related to the initial severity of the psychopathology, the level of resistance encountered by the student to the psychotherapeutic process employed, the need of the student for positive reinforcement from the therapist, and the range of dependency issues affecting the student.

SUMMARY

1. Rationale

No study has been conducted at the University of Cape Town (UCT) to characterise attendees at the UCT Student Health Service Mental Health Services (SHS-MHS) to assess correlates of presentation for various mental disorders. Most studies reported in the literature relating to mental health service attendance patterns pertain to American colleges and universities. There appears to be a gap in knowledge concerning Third World countries, especially Southern African countries, and this study will thus attempt to redress this current imbalance in the literature.

2. Aim and Objectives

Aim

To characterise students receiving mental health services at the University of Cape Town.

Objectives

(i) To describe students presenting at the UCT-SHS-MHS in terms of selected demographic, academic, residential (home address), financial assistance and clinical (diagnostic) variables.

(ii) To compare students presenting at the UCT-SHS-MHS with students presenting at the UCT-SHS who do NOT present at the UCT-SHS-MHS (controls) in terms of selected demographic, academic, residential (home address) and financial assistance variables.

(iii) To compare students presenting at the UCT-SHS-MHS with all other students attending the University of Cape Town in terms of selected demographic, academic, residential (home address) and financial assistance variables.

(iv) To examine the association between the number of consultations at the UCT-SHS-MHS and selected demographic, academic, residential (home address) and financial assistance variables.

The following variables were employed in the UCT-SHS study: (i) demographic variables include race/population group, gender, race/population group and gender combined, and age; (ii) academic variables include faculty, level of degree and year of study; (iii) residential (home address) variables include home addresses within metropolitan Cape Town and outside metropolitan Cape Town; (iv) financial assistance variables include status and value, and (v) clinical (diagnostic) variables include affective disorders, adjustment disorders, V codes and anxiety disorders.

3. Methodology

Subjects

(i) Patients: All UCT-SHS-MHS attendees with psychological or psychiatric complaints from January 1991 to December 1993.

(ii) Controls: UCT-SHS attendees with purely medical complaints who do NOT present at the UCT-SHS-MHS - who were matched to study patients by date and (where possible) time of consultation.

(iii) Student community: All students registered at the University of Cape Town from 1991 to 1993.

Procedures

(i) Data sources:

- Psychologist and psychiatrist "Patient Stat Details Sheets" - for patients;
- Medical officer "Patient Stat Details Sheets" - for controls;
- University of Cape Town Central Admissions Office records - for basic demographic, academic and residential (home address) data for patients, controls and the student community.
- University of Cape Town Undergraduate Financial Aid Office records - for financial assistance data for patients, controls and the student community.

(ii) Data processing

- Computerised data processing merged above data sources into a single data base for the purpose of data analysis.

Statistical analyses

Dependent variable is attendance at the UCT-SHS-MHS except Objective 4 where it is the number of attendances at the UCT SHS-MHS.

The Statistical Analysis System (SAS) statistical software package was used for all the univariate and bivariate analyses while the Statistica software package was employed for all the multivariate modelling.

(i) Objective 1 - Descriptive data was provided by means of frequencies and percentages;

(ii) Objective 2 - Analytic data for case control aspect was provided by means of unadjusted odds ratios (ORs) and ORs adjusted for gender, race/population group and age as well as multivariate logistic models with all the selected variables as independent variables;

(iii) Objective 3 - Analytic data for comparison of UCT-SHS-MHS attendees to the student community was provided by means of unadjusted odds ratios (ORs) and ORs adjusted for gender, race/population group and age as well as multivariate logistic models with all the selected variables as independent variables;

(iv) Objective 4 - Analytic data for number of UCT-SHS-MHS consultations will be provided by means of unadjusted odds ratios (ORs) and analysis of variance (ANOVA).

4. Results

Objective 1 (attendees)

(i) Patient-specific data

Data were available for 905 students; of these 528 (65%) were females, 428 (47%) were Blacks (Africans, Coloureds and Indians), 211 (23%) were ≥25 years of age, 306 (34%) were non-English first language speakers, 445 (49%) were Arts, Music and Social Science and Humanities faculty students, 755 (83%) were undergraduates, 474 (52%) were first year students, 510 (56%) resided outside metropolitan Cape Town and 227 (25%) were eligible for UCT-administered financial aid.

(ii) Clinical/diagnostic-specific data

Adjustment disorder (272 or 30%) was the most commonly documented major diagnostic category followed by V-codes (212 or 23%), anxiety (neurotic) disorder (176 or 19%), "other" disorders (160 or 17%) and affective disorder (100 or 11%). Likewise, relationship problem (88 or 42%) was the most commonly documented individual V-code followed by family problem (50 or 24%), pre- and post-termination counselling for unplanned/unwanted pregnancy (28 or 13%), complicated bereavement (26 or 12%) and academic problem (20 or 9%). For the selected variables employed in this study, the clinical/diagnostic-specific results were often in agreement with the patient-specific findings regarding the subcategory recording the higher number of attendees at the UCT-SHS-MHS.

Objective 2 (patients versus controls)

(i) Patient-specific data

The following subcategories produced statistically significant bivariate relationships: females (OR=1,9), English first language speakers (OR=1,3), Arts, Music and Social Science and Humanities faculty students (OR=1,8) and students residing within metropolitan Cape Town (OR=2,1). All these relationships remained significant in the logistic model.

(il) Clinical/diagnostic-specific data

Separate logistic models were developed for the five major diagnostic categories and the five individual V-codes. The following variables are no longer statistically significant in the most important clinical/diagnostic-specific models employed in the UCT-SHS study: (i) affective disorder – no changes; (ii) adjustment disorder – language; (iii) V-codes – language and faculty; (iv) anxiety (neurotic) disorder – gender and language; (v) relationship problem – language, and (vi) family problem – language and faculty. These findings are labelled as "Specific findings".

Objective 3 (patients versus the total student community)

(i) Odds ratios (ORs)

(a) Patient-specific data

The following subcategories produced statistically significant bivariate relationships: females (OR=2,0), Blacks (Africans, Coloureds and Indians) (OR=2,0), students <25 years of age (OR=1,6), non-English first language speakers (OR=1,7), Arts, Music and Social Science and Humanities faculty students (OR=2,6), undergraduates (OR=2,6), first year students (OR=1,3), students residing outside metropolitan Cape Town (OR=1,7) and students eligible for UCT-administered financial aid (OR=3,3). All these relationships, with the exception of race/population group, age and language-specific subcategories, remained significant in the logistic model.

(b) Clinical/diagnostic-specific data

Separate logistic models were developed for the five major diagnostic categories and the five individual V-codes. The following variables are no longer statistically significant in the most important clinical/diagnostic-specific models employed in the

UCT-SHS study: (i) affective disorder – no changes; (ii) adjustment disorder – level of study and residence (home address); (iii) V-codes – level of study, year of study and residence (home address); (iv) anxiety (neurotic) disorder – residence (home address); (v) relationship problem – level of study, year of study and residence (home address), and (vi) family problem – faculty, level of study and residence (home address). These findings are labelled as "Specific findings".

(ii) Usage/utilisation rate per 1 000 students

(a) Patient-specific data

The following subcategories produced usage/utilisation (prevalence) rates in excess of the mean of 39,1: females (54,4), Blacks (Africans, Coloureds and Indians) (58,2), students <25 years of age (44,0), non-English first language speakers (55,9), Arts, Music and Social Science and Humanities faculty students (68,5), undergraduates (50,3), first year students (50,6), students residing outside metropolitan Cape Town (51,1) and students eligible for UCT-administered financial aid (100,3).

(b) Clinical/diagnostic-specific data

Adjustment disorder (11,7) was the major diagnostic category responsible for the highest usage/utilisation (prevalence) rate followed by V-codes (9,2), anxiety (neurotic) disorder (7,6), "other" disorders (6,9) and affective disorder (4,3). Likewise, relationship problem was the individual V-code responsible for the highest usage/utilisation (prevalence) rate (3,8) followed by family problem (2,2), pre- and post-termination counselling for unplanned/unwanted pregnancy (1,2), complicated bereavement (1,1) and academic problem (0,9). For the selected variables employed in this study, the clinical/diagnostic-specific results were often in agreement with the patient-specific findings regarding the subcategory recording the higher usage/utilisation (prevalence) rate per 1 000 students at the UCT-SHS-MHS.

Objective 4 (number of consultations)

(i) Distribution

(a) Patient-specific data

Data were available for 3 441 consultations for 905 patients: of these 2 171 (63%) were females, 1 540 (45%) were Blacks (Africans, Coloureds and Indians), 851 (25%) were

≥25 years of age, 1 078 (31%) were non-English first language speakers, 1 758 (51%) were Arts, Music and Social Science and Humanities faculty students, 2 856 (83%) were undergraduates, 1 801 (52%) were first year students, 1 944 (57%) resided outside metropolitan Cape Town and 838 (24%) were eligible for UCT-administered financial aid. These results are highly compatible with the patient-specific data previously detailed in Objective 1.

(b) Clinical/diagnostic-specific data

Adjustment disorder (1 118 or 32%) was the major diagnostic category responsible for the greatest number of consultations followed by V-codes (758 or 22%), anxiety (neurotic) disorder (594 or 17%), affective disorder (568 or 17%) and "other" disorders (473 or 14%). These results follow a similar pattern to the clinical/diagnostic-specific data previously detailed in Objective 1 – with the exception that more patients were assessed as presenting with "other" disorders than affective disorder.

(ii) Mean

(a) Patient-specific data

The following subcategories produced mean number of consultations greater than the mean of 3,8: females (4,1: p=0,001 – this is the only statistically significant finding recorded in Objective 4 for the abridged/highly abridged format), Whites (4,0: p=0,061 – non-abridged format), students ≥25 years of age (4,0: p=0,434 – abridged format), English first language speaking students (3,9: p=0,080 – abridged format), Arts, Music and Social Science and Humanities faculty students (4,0: p=0,580 – non-abridged format) and postgraduates (4,0: p=0,556 – abridged format).

(b) Clinical/diagnostic-specific data

Affective disorder (5,7) was the major diagnostic category responsible for the highest mean number of consultations followed by adjustment disorder (4,1), V-codes (3,6), anxiety (neurotic) disorder (3,4) and "other" disorders (3,0). This result is statistically significant (p=0,000).

5. Discussion

Objective 1 (attendees)

The attendee-specific results are largely related to the composition of the University of Cape Town student population (viz. White students, students less than 25 years of age, English first language speaking students, non-Arts, Music and Social Science and Humanities faculty students, undergraduate students and students not receiving UCT-administered financial aid) although notable exceptions are female students, first year students and students whose home address is outside metropolitan Cape Town who may represent student subsets in greater need of psychotherapeutic intervention. It is possible, indeed probable, that demographic changes effected within the total student community subsequent to 1993 as a direct consequence of the ongoing transformation process affecting the University have resulted in a substantial alteration in the profile of UCT-SHS-MHS attendees. Therefore, a greater proportion of students currently attending the University would be non-English first language speaking Black students who are eligible for UCT-administered financial aid. It would, therefore, be a most useful exercise to conduct follow-up research to characterise students currently presenting at the UCT-SHS-MHS in order to accurately assess the impact of these rapid changes affecting the student body on UCT-SHS attendance patterns.

Objective 2 (patients versus controls)

There are at least two possible explanations for students using the UCT-SHS-MHS in preference to the UCT-SHS. These include: (i) a potentially greater knowledge of the psychotherapeutic process and its benefits exists amongst these students, or (ii) these students might find the psychotherapeutic process less threatening than their peers. Therefore male students, non-English first language speaking students, non-Arts, Music and Social Science and Humanities faculty students, and students residing outside metropolitan Cape Town are either particularly unaware or extremely unsure of the potential benefits to be derived from this process. The UCT-SHS should target preventive health education programmes concerning the role of the UCT-SHS-MHS in assisting students to reduce, inter alia, their levels of stress at these student subsets.

Objective 3 (patients versus the total student community)

The usage/utilisation rate-specific results are largely related to background cultural and socio-economic factors that affect students. Variable subcategories that are closely linked include non-English first language speaking students and students who are receiving UCT-administered financial aid which overwhelmingly refer to historically disadvantaged Black students. These subsets of students are, by definition, subject to the same set of adverse family and financial circumstances that could promote the development of various mental disorders while they are attending the University.

In addition, female students may be subject to gender discrimination and stereotyping and the added responsibility of caring for dependent children. On the other hand, Arts, Music and Social Science and Humanities faculty students, undergraduate students and first year students are subject to various academic-related concerns including enhanced levels of academic uncertainty, sense of confusion and self-doubt, the demanding transition from novice to skilled professional, scholar or performer and the "freshman myth" or the "matriculation myth". Consequently priority should be given to the implementation of measures designed to make the UCT-SHS-MHS more accessible and user-friendly to subsets of students who are especially vulnerable to mental disorders.

Objective 4 (number of consultations)

There are several possible reasons to explain the need of particular students to require longer-term psychotherapy at the UCT-SHS-MHS. These include: (i) the initial severity of psychopathology; (ii) the level of resistance encountered by the student to the psychotherapeutic process employed; (iii) the need of the student for positive reinforcement from the resident therapist, and (iv) the range of dependency issues affecting the student seeking evaluation and/or therapeutic intervention at the UCT-SHS-MHS for underlying psychological or psychiatric complaints. It is highly likely that additional cultural factors could also play an important role in deciding the length of treatment that students may require for their presenting complaints insofar as the predominantly White female and middle-class UCT-SHS-MHS therapists may have difficulty in recognising the true nature of the initial presenting complaint in students whose culture is different to their own. This may severely retard the evaluation process and result in an undue delay in making the appropriate clinical diagnosis.

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Chapter 1

INTRODUCTION

This chapter is divided into six sections. The first section provides a brief overview to the University of Cape Town whose students form the community from which subjects for this research work are derived. The second section describes the UCT-SHS/MHS (University of Cape Town Student Health Service – including the Mental Health Services) which provides, inter alia, evaluation and/or therapeutic intervention to students with psychological and psychiatric complaints. The third section outlines the rationale for this research while the fourth section documents its aims and objectives. The fifth section provides justification for race-based research as this thesis employs race/population group as one of the variables under investigation. The sixth section details the outline of the thesis.

1.1 UNIVERSITY OF CAPE TOWN

The University of Cape Town (UCT), one of the oldest institutions of higher learning in sub-Saharan Africa, has its origins in the South African College in 1829 and attained university status in 1918. It is situated on four campuses (spread over 135 hectares) close to the centre of the city, the largest of which is in Rondebosch and Rosebank. UCT currently has a student population over 14 000, of whom nearly 4 000 are housed on campus. During the study period the University offered courses in about 100 departments organised, until December 1998, into ten faculties: Arts, Commerce, Education, Engineering, Fine Art & Architecture, Law, Medicine, Music, Science and Social Studies & Humanities. However, from January 1999, a new faculty structure was implemented with six faculties: (i) Commerce, (ii) Engineering and the Built Environment, consisting of, inter alia, the previous faculties of Engineering and the School of Architecture, (iii) Health Sciences, consisting of the previous faculty of Medicine, (iv) Humanities, consisting of the previous faculties of Arts, Education, Music, and Social Science and Humanities together with the Michaelis School of Fine Art, (v) Law and (vi) Science. UCT currently employs about 1 350 academics, 600 research and 2 300 administrative and support staff, not including joint medical staff employed by the health authority in the teaching hospitals.

During the past 30 years, the University has experienced rapid expansion and transformation. Student numbers have more than doubled and postgraduate enrolment has increased more than five times (postgraduate students accounted for nearly 30 per cent of all students by 1997). The enrolment of Black (African – especially, Coloured and Indian) students, reduced in the period from 1960 to 1980 due to apartheid legislation, reached 39 per cent in 1994 and 47 per cent in 1997. University authorities recognise

that the educational legacies of apartheid have presented new challenges for UCT's educational processes insofar as the now significant numbers of Black students provide the University with major opportunities to forge a new identity as a South African university. UCT, as part of this transformation process, adopted a new Mission Statement formulated by a Working Group of the University Transformation Forum during 1996. The Mission Statement was the result of widespread consultation involving all sectors of the UCT community. One of the three tenets of this document entails "addressing the challenges facing our society" whereby the University must strive to, inter alia, "transcend the legacy of apartheid in South Africa" and "promote equal opportunity and the full development of human potential." One way in which UCT could achieve these goals listed in its Mission Statement would be to provide students, especially those from an historically disadvantaged background who would formerly have been excluded from its ranks, with appropriate and accessible health services via the UCT-SHS.

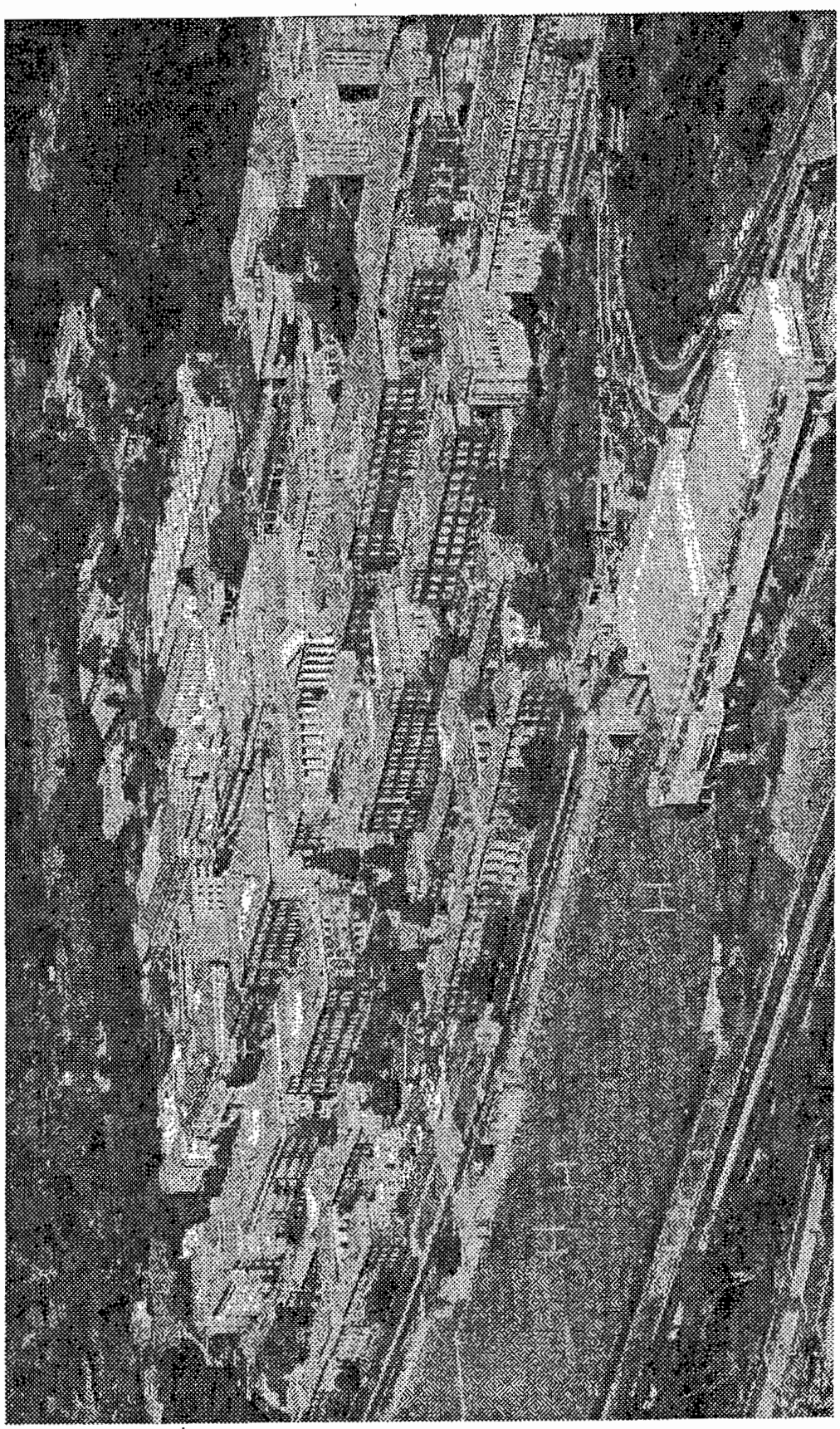

Figure 1.1 University of Cape Town (from Mackay, 1999 and Naidu, 1999).

1.2 UNIVERSITY OF CAPE TOWN STUDENT HEALTH SERVICE (UCT-SHS)/MENTAL HEALTH SERVICES (MHS)

The UCT-SHS provides a limited health service comprising basic health care for students. The University expects the UCT-SHS to:

- play a health education role (which, at present, is limited by resources of staff and finance),
- provide a medical clinic for students (including a confidential HIV-testing service with pre- and post-test counselling),
- operate a clinic and a limited emergency call-out service for residence students,
- operate a sports injuries clinic (including physiotherapy),
- provide limited psychological and psychiatric counselling services (which does not include group therapy sessions) to students.

The UCT-SHS also has regular contact with other University sectors, outside the Student Affairs Department (which is directly responsible for the UCT-SHS), such as the Disability Unit, residence sector, exam deferment committee and academic sector. The aim of the UCT-SHS is to provide appropriate, cost-effective health care for students. It is moving from a service based on curative medicine to a primary health care model of health promotion and disease prevention. It endeavours to consult students about their needs whenever possible and students are represented on those committees through which policy decisions are made.

The UCT-SHS charges students medical aid rates in accordance with the Representative Association of Medical Schemes (RAMS) for medical consultations and medical procedures. Services are free to students classified by the University as being indigent and thus unable to afford medical care. Any student on UCT financial aid is deemed indigent, and other students may be deemed indigent by criteria established by the Undergraduate Financial Aid Office. All consultations with nursing staff (including contraceptive clinic visits and HIV-testing) are free. The UCT-SHS as a matter of policy does not offer in-patient facilities, nor does it offer services to staff, except in emergencies. Some patients are consequently referred to Groote Schuur Hospital for treatment.

The UCT-SHS is staffed by doctors, nursing sisters, psychologists, a psychiatrist and support staff. One full-time doctor serves as the Director of the UCT-SHS. There are two more doctors at the UCT-SHS, one full-time, one part-time and others who are available for sessions during the week. The doctors usually see patients by appointment while three full-time and two sessional nursing sisters who see patients on a first-come, first-served basis, also run the "family planning clinic" daily.

As outlined above, the mental health service (UCT-SHS-MHS) is one component of the UCT-SHS in providing students with appropriate and accessible health services. The UCT-SHS-MHS can be regarded as

a functional entity as opposed to a separate structural or bureaucratic entity. This somewhat arbitrary division has been employed for the purpose of this research. Consequently, the following convention will be adopted in this thesis: (i) UCT-SHS will refer to the structural and bureaucratic entity providing students with both physical and mental health services while (ii) UCT-SHS-MHS will refer to the separate functional entity (within the UCT-SHS) providing students with psychological and/or psychiatric evaluation and/or therapeutic intervention.

The UCT-SHS-MHS has a clinical psychologist available for consultations daily from 08h40 to 16h30 with four clinical psychologists and a psychiatric social worker (all sessional staff) also present. A consultant psychiatrist (sessional staff) comes in for consultations on Monday mornings. All patients who see the psychiatrist must be referred by a doctor or psychologist and are seen by appointment. Patients will receive a maximum of six sessions with the counselling staff after which they are referred either to a private practice, Groote Schuur Hospital or the Child Guidance Clinic, depending on the patient's financial status.

The most common routes of referral to the UCT-SHS-MHS are, in fact, internal referrals. These referrals arise as a result of: (i) a UCT-SHS medical officer (or occasionally nursing sister) uncovering information regarding a psychological stressor as the cause of an often seemingly unrelated physical complaint or (ii) self-referral by students who are either strongly aware of the nature of their complaint or have previously sought or received evaluation and/or intervention from a UCT-SHS-MHS therapist. Other less common routes of referral include: (i) the UCT-SADC (Student Advice and Development Centre) which assists students with non-academic problems by offering advice on a range of aspects affecting more disadvantaged students such as financial matters, bursaries, accommodation, etc., (ii) the UCT-UFAO (Undergraduate Financial Aid Office) which provides bursary assistance to financially needy undergraduate students, loans for financially needy undergraduate students and scholarships for meritorious students and (iii) the UCT-TMU (Teaching Methods Unit. Head: Professor J.H.F. Meyer, until disbandment in 1995) which evaluated the quality of student learning within the University. These student service-orientated facilities employ staff who are in positions to recognise mental health problems that would require further specialist intervention at the UCT-SHS-MHS. There have apparently been occasional problems at the UCT-SADC when under trained staff have endeavoured to provide specialist counselling to students who should rather have received direct referral to the UCT-SHS-MHS. Other far less common routes of referral would include private general practitioners and Groote Schuur Hospital (GSH) Casualty Department.

The Director of the UCT-SHS states in a report that the profile of clients and their presenting problems had changed quite fundamentally in the preceding five years. Therapists feel that problems are more complex and severe than those seen previously and, while an acute crisis may precipitate the presentation, the crisis is often rooted in long-standing problems. Many UCT-SHS-MHS clients are students who are less articulate regarding their problems and have no "culture" of counselling on which to base their encounters with therapists at the UCT-SHS-MHS. It thus tends to take a far longer time than previously to delineate and define the problem, before any real assistance can be offered. The combined effect of these issues is

that therapists need more time and more sessions with their clients in order to have an impact. The past system of six consultations per client and three 45-minute appointments per therapist's four-hour session, was (by 1994) in many cases, inadequate (Dr W.P. Orr – personal communication).

Because more clients are needed to be seen for more than six appointments, referrals became a significant problem. Psychotherapeutic services in the public sector were seldom able to meet UCT-SHS–MHS demand. Often the only solution was, consequently, to see the client at the UCT-SHS–MHS as long as it was needed, which meant that other people who needed appointments could not be accommodated. Another problem was that the only therapist available from the end of November to the beginning of March is the Chief Clinical Psychologist, who takes leave for four to five weeks during this period. Although this is during the University vacation, the UCT-SHS is closed for only one week between Christmas and New Year and there are always students who need to see a therapist when no-one is available.

The subcommittee established by the Student Affairs Committee to review the provision of counselling services in the former Student Affairs Department (UCT-SAD/SAF) (refer to Appendix IX for further details concerning the background and recommendations of this subcommittee) received, inter alia, the following input from the UCT-SHS-MHS concerning service coordination and staffing:

- There was room for more consultation between the professionals providing mental health services as many of the problems raised (during the tenure of the subcommittee) could best be dealt with through an interdisciplinary approach.
- There was little coordination between the proliferation of counselling services at UCT with consequent fragmentation of support services for disadvantaged students.
- The changing needs of students needed to be identified – for example, disadvantaged students faced problems of dislocation and adaptation to the University environment.
- The limit of six sessions per student did not allow psychological staff to assess the "bigger picture" of the above-mentioned needs.
- Sessional staff would benefit from a period of induction on the above issues by visiting other centres such as the Student Advice and Development Centre (UCT-SADC), UCT Careers Office, etc.
- Because of staffing limitations, the UCT-SHS-MHS did not have time to conduct mental health education.
- It was recommended that a sessional person be employed at the UCT-SADC to screen individuals seeking assistance. There was a concern that staff at the UCT-SADC were not equipped to deal with the problems they currently handled and, in addition, they were resistant to making referrals to the UCT-SHS-MHS.

In conclusion, the role of the UCT-SHS in serving the total student community is highlighted by the following 1994 usage/utilisation figures insofar as there were: (i) 4 621 doctor consultations; (ii) 10 517 nursing sister consultations; (iii) approximately 1 300 psychotherapy consultations, and (iv) 8 292 consultations at the Sports Injuries Clinic for physiotherapy. Therefore, allowing for a certain number of repeat consultations, the UCT-SHS appears to serve a significant portion of the 14 000 students registered at the University.

1.3 RATIONALE

This candidate, while employed as a medical officer at the UCT-SHS, noted that students from historically disadvantaged backgrounds, especially African students, appeared to be more predisposed to certain mental disorders than students from advantaged backgrounds. These mental disorders were responsible for much morbidity including physical complaints which were often severe enough to cause additional psychological distress and academic problems. These combined mental and physical complaints often produced sufficient functional impairment to cause a decline in academic performance. In these cases, there was a vicious and potentially self-destructive cycle whereby the psychological problem caused the physical complaint which, in turn, perpetuated and exacerbated the initial underlying mental disorder.

This candidate has, at first hand, witnessed the suffering and the consequences of these mental health casualties which included: (i) total lack of enjoyment of the university experience which is potentially a period of personal growth and fulfilment despite some limited degree of stress as opposed to obvious distress, (ii) academic failure – either leading to unnecessary supplementary examinations, repeated courses (both at great expense) or exclusion from the university on academic grounds (at even greater expense) and (iii) the development of severe psychological and psychiatric complaints. This could have led to in-patient hospitalisation when prolonged distress has not successfully responded to outpatient (UCT-SHS-MHS)-based treatment.

Although this candidate was often aware of the presence of underlying psychological problems in patients presenting with physical complaints at the UCT-SHS, not all patients were receptive to discussing their problems. Many students either denied the existence of any mental health problem or were satisfied to address this issue in a superficial manner without seeking or accepting further treatment. Indeed, many patients from historically disadvantaged backgrounds, especially African students, often expressed great reticence or, even open hostility, at the prospect of receiving evaluation and/or therapeutic intervention from a psychologist or a psychiatrist. Therefore, it became evident that not all students who were affected by mental disorders would seek treatment even though they did attend the UCT-SHS for purely medical complaints.

Although the majority of UCT students were both physically and mentally healthy while attending the University, this candidate would suggest that there was a subset of students within the student community who were affected by psychological or psychiatric complaints who did NOT attend the UCT-SHS for either medical or mental health problems. These students might either: (i) seek no professional attention for their complaints if deemed trivial, (ii) consult the private health care sector or, (iii) in the case of many African students, seek the advice of a traditional healer. From the number of patients attending the UCT-SHS-MHS it became apparent that not all UCT students were affected by mental disorders and, not all of those who were, would seek treatment at the UCT-SHS-MHS.

Having treated several UCT-SHS-MHS patients for co-existing medical complaints, this candidate has noted that certain students appeared to be either more predisposed to require longer-term psychotherapy, often entailing well in excess of the prescribed maximum of six sessions with the psychologist, or several courses of short-term psychotherapy, also entailing well in excess of six sessions with the psychologist. Many other patients, however, seemed to have been successfully treated with a single course of short-term psychotherapy requiring considerably less than six sessions with the psychologist. Therefore, it became apparent that not all students who are affected by mental disorders require the same level of therapeutic intervention at the UCT-SHS-MHS.

It was felt that it would be extremely useful to document the profile of students who attended the UCT-SHS-MHS for mental disorders from January 1991 to December 1993 according to selected demographic, academic, residential (home address) and financial assistance variables. Therefore, this candidate initiated a PILOT study (refer to Chapter 4 for further details) shortly after joining the UCT-SHS in May 1993 to test the feasibility of such an exercise. Subsequently, it was felt that this descriptive material should be complemented by additional analytical components which would address concerns regarding differences between UCT-SHS-MHS attendees and non-attendees (both those who presented at the UCT-SHS with purely medical complaints and the total UCT student community) according to the same selected variables. This would distinguish those students who were willing to seek evaluation and/or therapeutic intervention at the UCT-SHS-MHS from other students who were either: (i) free of mental disorders, (ii) receiving therapy elsewhere or (iii) unwilling to receive therapy. UCT-SHS attendees who do NOT present at the UCT-SHS-MHS might fall into the final category.

Furthermore, it was felt that it would be beneficial to investigate whether there were differences in the mean number of consultations (sessions) required by individual UCT-SHS-MHS attendees, again according to the same selected variables. This would determine whether there are particular subsets of student attendees who are either more compliant with respect to their treatment or who might require more extensive psychotherapy due to either: (i) more severe presenting psychopathology; (ii) resistance to therapeutic intervention employed, or (iii) need for reinforcement and/or dependency issues.

In conclusion, this research is highly noteworthy insofar as the study period coincides with major political changes that were sweeping this country whereby several restrictive features of apartheid-inspired legislation were being actively dismantled and removed from the statute books. Therefore, the University and its student community were also subject to this process of change. The results of this thesis should be extremely useful to relevant University authorities as they might identify subgroups of students who were underrepresented amongst UCT-SHS-MHS attendees during this period of rapid transformation. This information would enable these authorities to undertake appropriate steps to address such imbalances.

1.4 AIM AND OBJECTIVES

1.4.1 Aim

To document the characteristics of students receiving mental health services at the University of Cape Town.

1.4.2 Objectives

(i) To describe students presenting at the UCT-SHS-MHS in terms of selected demographic, academic, residential (home address), financial assistance and clinical (diagnostic) variables. (See below)

(ii) To compare students presenting at the UCT-SHS-MHS with students presenting at the UCT-SHS who do NOT present at the UCT-SHS-MHS (controls) in terms of selected demographic, academic, residential (home address) and financial assistance variables. (See below)

(iii) To compare students presenting at the UCT-SHS-MHS with all other students attending the University of Cape Town in terms of selected demographic, academic, residential (home address), financial assistance and, where appropriate, clinical (diagnostic) variables. (See below)

(iv) To examine the association between the number of consultations at the UCT-SHS-MHS and selected demographic, academic, residential (home address) and financial assistance variables. (See below)

Demographic variables include gender, race/population group, race/population group and gender as a combined variable, age and language. Academic variables include faculty, level of study and year of study. The residential (home address) variable is defined, inter alia, by 30 individual postal code groupings (PCGs) covering South Africa and Namibia. The financial assistance variable which documents the presence or absence of UCT-administrated financial aid is employed as an indirect socio-economic indicator as students (and their parents) have to meet strict income-related criteria before becoming eligible for UCT-administered financial aid. These variables are all exposure orientated as they are pre-existing characteristics of UCT-SHS-MHS attendees. Conversely the clinical (diagnostic) variable is outcome orientated as it is an acquired characteristic of UCT-SHS-MHS attendees.

1.5 RACE-BASED RESEARCH

This study utilizes racial classifications in a way that, given South Africa's apartheid history, may be found offensive. Such categorization, it should be noted, however, does not imply an acceptance of, or a wish to perpetuate, politically constructed categories of identity. Racial classifications are used, paradoxically perhaps, to try to understand, and possibly address, the consequences of the socially constructed, politically motivated segregation imposed by apartheid.

> *During the years of apartheid, racial groupings were accorded many different labels, both by the system itself and by those being labelled. This study uses the terms 'Black, 'Coloured', 'Indian' and 'White' with the realization that these terms are all historically loaded and contentious and may not be the terms of preference both for the participants in and readers of this research.*
>
> (Gelman, 1999: p. xviii)

This statement by Gelman is an extremely erudite repudiation of the practice of institutionalised racism and the use of racial classification to enforce it. This candidate wholeheartedly and unreservedly endorses this viewpoint which briefly addresses both the negative (on historical grounds) and the positive (for, inter alia, affirmative health planning programmes) aspects of employing race-based research.

Therefore, although race/population group has been previously mentioned in the objectives subsection detailing selected demographic variables relating to student mental health service attendance, this particular subsection will address the issue of race-based research from a broader perspective. This step is necessitated by the fact that race/population group has always been a highly contentious issue in South Africa (refer above) – especially as many of the problems currently confronting educationally underprepared historically disadvantaged Black students can be directly ascribed to the legacy of apartheid.

1.5.1 Goals/function

Ellison et al. (1997) note that the socio-economic hierarchy of race/population groups created during the apartheid era is responsible for creating and maintaining differences in the health status of different groups. Indeed, the authors state that these race/population group categories represent proxy measures of social criteria such as access to education, employment, wealth and health care – background factors that are of great relevance to the UCT-SHS study. (In the absence of any readily available socio-economic indicators this study is forced to rely on this form of proxy measure.) Bergner (1993) and Cooper (1984) observe that racial and ethnic differences in disease are likely to be the consequence of racism and ethnic discrimination while Van Rensburg and Fourie (1994) remark that South Africa provides a clear example of how discrimination results in differential exposure to environmental risks and differential access to health care. Ellison and De Wet (1997), however, caution that most of the words used by traditional and contemporary racial taxonomies to describe their generic and specific categories are simply labels that do not reflect the consistent use of genotypic, phenotypic or geographical criteria during classification and do not provide an accurate description of each category's genotype, phenotype or geographical origins.

1.5.2 Advantages

Ellison et al. (1996) observe that categorising race/population groups and comparing patterns of disease between different groups of people can be a useful technique for identifying potential causes of disease – especially as race/population group classification provides important information for assessing the impact of apartheid on disparities in health status within South Africa. Certain influential South(ern) African organisations recognise that race/population group categorisation is still beneficial. The Epidemiological Society of Southern Africa (ESSA) notes that inequalities in health caused by race/population group classification under apartheid are exposed and resources are targeted effectively and optimally to reduce these discrepancies (Yach, 1991) while the 1994 National Health Plan of the African National Congress (ANC) called for the use of health data disaggregated by race/population group to monitor apartheid/generated disparities in health and differential access to health care (ANC, 1994).

1.5.3 Disadvantages

Ellison et al. (1996) state that the dilemma facing contemporary health researchers is how to examine the consequence of racism and ethnic discrimination without drawing attention to arbitrary differences between groups of people. In South Africa, the use of race/population group categorisation in public health research could easily be misinterpreted as "acquiescing with the philosophy of apartheid" (Lee, 1989) and "tacit acceptance of a discredited system" (West and Boonzaier, 1989).

1.5.4 Summary

Due to the legacy of apartheid, outlined above, the educationally underprepared, historically disadvantaged Black student is required to undergo a major adjustment in order to adapt to the varied and complex academic and social demands of university life. Personal clinical observation has suggested that this group of students are more inclined to certain mental disorders (often adjustment-related) presenting as psychological or psychiatric complaints at the UCT-SHS-MHS than their generally historically advantaged non-Black peers. Therefore, it is highly relevant (and beneficial) to assess whether these students (or subsets thereof) are indeed subject to a higher usage/utilisation rate of the UCT-SHS-MHS than their White peers as positive confirmation (and quantification) of this clinical observation could lead University authorities to institute specific preventive programmes directed at high risk subsets of Black students. The use of race/population group in the UCT-SHS study can thus be viewed as a serious attempt to help address the consequences of past imbalances affecting students attending a tertiary educational institution. Accordingly, this research aims to make a meaningful contribution to equal opportunity programmes instituted at the University of Cape Town as part of the transformation process required for it to realise its mission statement of becoming an outstanding African teaching and research university. Therefore, in summary, the UCT-SHS study aims to fulfil the mandate of Ellison et al. (1996) who recommend that

health researchers should consider the relative merits and disadvantages of categorisation using race/population group membership, and should only use these categories when the benefits outweigh any potential harm.

1.6 OUTLINE

This thesis is divided into seven chapters. Chapter 1, outlined here, comprises the introduction which is concerned with relevant background factors. These include the University and its structures responsible for the delivery of health care services to students. In addition, the rationale for this research is discussed together with its stated aim and objectives. The issue of race-based research is also addressed.

Chapter 2 comprises the conceptual framework. This describes the thesis in terms of Primary Health Care (PHC) as the UCT-SHS provides students with this level of service. The four facets of community psychology proposed by Lewis and Lewis (1977) are also introduced as the total UCT student community comprises a discrete population which can be managed in terms of this model.

Chapter 3 comprises the literature review. This records (in varying depth) references appearing in the literature that relate to the field of student mental health addressed in this thesis. The interaction between the student and the college/university is detailed including successful and unsuccessful student adjustment to the often rigorous demands of the tertiary education process. The role of the student mental health service is outlined together with the differences between users and non-users of these facilities. Specific findings relating to developed (first world), developing (third world) and Southern African countries are documented for exposure-orientated (viz. selected demographic, academic, residential (home address) and financial assistance) variables together with corresponding outcome-orientated (viz. clinical) variables.

Chapter 4 comprises the methodology. This describes the study design adopted for each of the objectives. It defines the sample of UCT-SHS-MHS attendees (patients) and UCT-SHS attendees who do NOT present at the UCT-SHS-MHS (controls) as well as the total UCT student community. A PILOT study undertaken prior to this research is included. The individual selected demographic, academic, residential (home address) and financial assistance variables which are exposure orientated together with the clinical variables which are outcome orientated are described in terms of their component subcategories. Data sources are outlined together with ethical considerations involved whereby patients and controls are identified and variable-specific data obtained. This chapter concludes with the statistical techniques employed for data analysis. These include univariate, bivariate and multivariate techniques.

Chapter 5 comprises the results. These are arranged according to the selected demographic, academic, residential (home address) and financial assistance variables initially detailed in the literature review and subsequently further described in the methodology. The four stated objectives are incorporated into each of

the ten (including race/population group and gender combined) individual variables. Each variable, therefore, has a uniform layout which permits ready comparison between the respective individual subsections and subheadings. In addition, the summary section contains further inter/variable comparisons.

Chapter 6 comprises the discussion. Methodological aspects including strengths, constraints and limitations as well as ethical considerations are outlined. The findings for overall attendees, demographic, academic, residential (home address), financial assistance and clinical variables detailed in Chapter 5 are compared to corresponding results obtained from other tertiary educational institutions in developed (first world) countries, developing (third world) countries and Southern African countries. Certain findings (e.g. the distribution of attendees whose home address is in the suburbs within metropolitan Cape Town) are discussed in some depth. The utility of this study including a list of potential beneficiaries as well as a fairly comprehensive list of specific recommendations are catalogued. A series of photographs illustrating some of the highlights in the careers of students attending the University of Cape Town – from registration to graduation – conclude this chapter.

A comprehensive set of references and twelve separate appendices follow the above chapters.

Chapter 2

CONCEPTUAL BACKGROUND

This chapter is divided into three sections. The first section commences with the health care delivery system (an appropriate starting point of any research in the health services) encompassed by primary health care (PHC). This topic, after the accepted WHO and UNICEF definition – together with an outline of the related concepts of wellness, General Systems Theory and normality, is further developed according to the conceptual framework of community participation, equity, integration within the health system, health technology and research employed by Mathews (1992) as it is appropriate to the university setting of this research. Likewise, in the second section, the field of community psychology is defined and the component extensive experiential, intensive experiential, extensive environmental and intensive environmental facets described by Lewis and Lewis (1977) are outlined in some detail as this schema is also relevant to the university setting of this research. The third section, in the form of a brief concluding commentary, highlights the academic fields, social issues and public health research topics that are addressed by the UCT-SHS study. These fields, issues and research topics provide a general-purpose conceptual background to which the more specific frameworks detailed above can be linked.

These two overarching frameworks which outline the range of activities encompassed by the disciplines of primary health care and community psychology, respectively, serve to illuminate different aspects of mental health care relevant to the role, structure and services offered by the UCT-SHS-MHS. Therefore, wherever possible, the theoretical material contained in these sections is accompanied by practical references relating, inter alia, to the experiences and expectations of the UCT student or the duties and obligations of the student-orientated service provider. It is noteworthy that the ethos of both these disciplines is to: (i) place a strong emphasis on the optimal delivery of services to the public; (ii) provide broad perspectives as opposed to specific interventions or techniques, and (iii) serve to expand the role perspective of the clinical discipline.

2.1 PRIMARY HEALTH CARE

2.1.1 Definitions

2.1.1.1 Health

A standard definition that is now accepted worldwide of health was adopted by the World Health Organisation (WHO) and the United Nations Children's Fund (UNICEF) at Alma Ata in 1978. It reads as follows:

> *Health is a state of complete physical, mental and social well-being, and not the absence of disease or infirmity.*
>
> (WHO, 1978, quoted by Mathews, 1992: p. 9 – 10)

This is a socio-ecological definition that recognises the inextricable link between individuals, groups and populations and their environment in determining health. Thus, it takes concerns of health from the biological to include environmental factors that influence the health of individuals, groups and populations (Mukoma, 1999). In this study, the individuals, groups and populations refer to either individual students or specific subsets of students attending the University of Cape Town and/or the UCT-SHS and/or the UCT-SHS-MHS while the environment refers to that created and maintained on-campus by relevant University authorities. However, Katzenellenbogen (1990) states that most attempts at defining health have met with criticism due to the complex, multifactorial nature of the concept. The common themes that emerge in the literature are: (i) health as the absence of symptoms, illness or disability; (ii) health as a positively valued psychological experience; (iii) health as balance or equilibrium within oneself and with the environment; (iv) health as a capacity or potential to pursue personal goals and to cope with environmental and social demands, and (v) health as the process of goal-directed action or as the process of effective coping.

On the other hand, Hybertson et al. (1992) note that wellness is conceptualised as multidimensional, involving all aspects of existence. According to Hettler (1980), there are six wellness dimensions: (i) physical (nutrition, exercise, sleep, safety); (ii) emotional (awareness, expression of feeling, feelings about self); (iii) spiritual (philosophical or religious pursuit of personal meaning); (iv) occupational (career, university); (v) social (marital and family relationships, friendships, helping others), and (vi) intellectual (understanding, analysis, reading, writing, cultural activities). Wellness is experienced as health and a sense of well-being. Each one of these wellness dimensions (especially (ii), (iii), (iv) and (v)) would appear to be extremely relevant to the mental health of students attending a tertiary educational institution such as the University of Cape Town. Any impairment of one of these dimensions in a student could lead to the development of psychological or psychiatric complaints requiring evaluation and/or therapeutic intervention at the UCT-SHS-MHS. A further use for Hettler's model was devised by Archer, Probert and Gage (1987) who, using a national sample of college/university students, concluded that it could be applied to designing university wellness programmes.

Similarly, General Systems Theory (Finney, 1962; Miller, 1955) suggests that sickness (the absence of health characterised by mental disorders requiring evaluation and/or therapeutic intervention at the UCT-SHS-MHS in this study) involves a failure of control mechanisms to keep certain critical variables within prescribed limits of homeostatic equilibrium. In this sense, the individual (student) might be viewed as an open system, composed of patterned subsystems (incorporating selected demographic, academic, residential (home address) and financial assistance variables) and operating in dynamic exchange with a suprasystem (including the sociocultural environment of the University). Stemming from this view of the total life-space, three "rational" dimensions are delineated: (i) intrapsychic function which refers to the absence of significant thought disorder, affect disturbance or physiological imbalance in the individual (this dimension is clearly

outside the prescribed limits of homeostatic equilibrium in the vast majority of students who seek evaluation and/or therapeutic intervention at the UCT-SHS-MHS); (ii) interpersonal function which refers to the individual's ability to form and maintain adequate and satisfactory face-to-face relationships, such as, friendships, relations with peers of both sexes and persons in authority (this dimension is of great importance in ensuring that the student completes a successful adjustment to the college/university – also refer to Honikman's quotation under the heading of section 3.1.3), and (iii) social role function which refers to the individual's ability to carry through his/her predominant role in society efficiently and with average success (this dimension would include the ability of the student to achieve his/her full intellectual potential in academic activities in order to be able to successfully complete his/her studies). Failure of control mechanisms to keep any one of these three "rational" dimensions in homeostatic equilibrium could result in sufficiently severe impairment of the student's functional capacity to lead to exclusion from the University on academic grounds – especially if that student is already historically disadvantaged and educationally underprepared for the demands of a tertiary education.

In conclusion, Isaacs (1990) states that there are a number of criteria in use for defining normality. These include: (i) symptoms; (ii) patterns of behaviour; (iii) cultural expectations; (iv) criteria based on statistical concepts, and (v) social functioning. Symptoms and patterns of behaviour may, for some conditions, be rather dramatic indicators of pathology. Social functioning refers to the expectations people in the immediate social space have of the individual. Social disablement, which refers to problems in social functioning, may be regarded by people in the social environment as evidence of psychological impairment. In determining the normality (or otherwise) of the mental health status of an individual student within the student community, the level of social and academic functioning provide two important indicators to assess. Occasionally, mental health problems result in aberrant patterns of behaviour that are florid enough to be reported by fellow students and/or residence wardens. This would often result in emergency consultations at the UCT-SHS-MHS which may, in turn, frequently require referral to the Casualty Department of the local tertiary teaching hospital (Groote Schuur Hospital). Often, as the cultural expectations of the University revolve around academic performance as measured by the successful completion of assignments, class tests, mid-year and end-of-year examinations, adverse academic functioning (often based on an assessment of the student's performance employing the statistical concept of year mark) may be the indicator of underlying mental disorders requiring evaluation and/or therapeutic intervention at the UCT-SHS-MHS. If left unattended or incompletely treated, these psychological or psychiatric complaints could lead to a level of academic impairment severe enough to lead to exclusion from the University on academic grounds.

2.1.1.2 Primary Health Care (PHC)

A standard definition that is now accepted worldwide of primary health care (PHC) was adopted by the World Health Organisation (WHO) and the United Nations Children's Fund (UNICEF) at Alma Ata in 1978. It reads as follows:

> *PHC is essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self reliance and self determination. It forms an integral part both of the country's health system, of which it is the central function and main focus, and of the overall function and economic development of the community. It is the first level of contact of individuals, the family and the community with the national health system bringing health care as close as possible to where people live and work and constitutes the first element of a continuing health care process.*
>
> (WHO, 1978, quoted by Mathews, 1992: p. 4)

Newell (1988) quoted by Mathews (1992), in interpreting the above definition, states that the most important goals or principles of PHC are: (i) that a PHC system is to be designed around the life patterns of the population; (ii) the total health system is to be designed to support the needs of the periphery; (iii) there is an acceptance that many primary causes of ill-health were based on problems such as poverty, deprivation and environmental abuse; (iv) there is a need for active participation (ownership) of health systems by local population, and (v) equity.

As the subjects of the UCT-SHS study comprise students with various mental disorders presenting at the UCT-SHS-MHS for evaluation and/or therapeutic intervention, this situation, therefore, describes the absence of a state of complete mental well-being as proposed by the WHO and UNICEF. In addition, examining Katzenellenbogen's review of the literature, there is an obvious lack of any positively valued psychological experience and an equally obvious absence of balance and equilibrium between patients (defined by students presenting at the UCT-SHS-MHS) with themselves and the University (and/or home) environment. Consequently, there is a substantially diminished capacity or potential to pursue personal (often academic and professional) goals and to cope with the exacting demands of University life which is often manifested by a lack of goal directed action (viz. apathy and academic inhibition) or effective coping mechanisms.

As the UCT-SHS employs skilled professionals (medical officers, nursing sisters, psychologists and a sessional psychiatrist), the service provided is practical, scientifically sound and (hopefully) socially acceptable. As all registered students are permitted to make use of all the services provided by the UCT-SHS, this service is indeed universally accessible. The level of the service provided is such that the University can afford while student cost is generally affordable – especially as students receiving University – administered financial aid receive treatment free of cost while professional staff have the discretion to grant a waiver on fees for needy students who do not receive University-administered financial aid. Although the University Student Representative Council (UCT-SRC) does have representation on the Student Health Committee, the director and professional staff are responsible for the day-to-day management of the UCT-SHS – a situation which deviates somewhat from the WHO and UNICEF ideal. Because of financial limitations and practical considerations, the University provides only basic (primary) health care for its students with patients requiring further, more complex investigation and/or treatment being referred to regional secondary and tertiary hospitals. Therefore, the UCT-SHS, as the main facility at the University of

Cape Town to cater to the physical and mental health complaints of the student community, is, by definition, a primary health care (PHC) centre.

The UCT-SHS should indeed be designed around the life pattern of the student community and should, therefore, be sympathetic to their academic (inter alia) aspirations and fears. Professional (and non-professional) staff should be aware of the additional stress associated with class tests, mid-year and end-of-year examinations – consequently extra cover should be available to cater for the associated increased demand (and need) for counselling services. Generally, due to budgetary restraints, this idealised situation to support the needs of students is not available. Resident therapists, most of whom have fairly extensive experience in the field of student mental health, have learnt to accept the relationship between presenting psychological (and psychiatric) complaints and various background social and socio-economic factors pertaining to the individual student. These factors include adverse financial and domestic circumstances, often affecting historically disadvantaged Black students, which compound academic problems caused by pre-existing educational under-preparation. This combination of factors, together with the additional stress of often profound cultural differences between background domestic circumstances and the University environment, often serve to precipitate these students to adjustment-related complaints requiring therapeutic intervention at the UCT-SHS-MHS.

2.1.2 Component Principles of Primary Health Care (PHC)

The important principles of PHC as defined by the WHO and UNICEF have been employed as a conceptual framework by Mathews (1992) in her thesis evaluating the implementation of primary health care in South Africa with special reference to non-governmental PHC projects in the Western Cape, Boland and Overberg. This framework (with minor modifications) will be employed in this subsection to contextualise the UCT-SHS study and the functioning of the UCT-SHS-MHS itself within the PHC approach.

2.1.2.1 Community participation

PHC requires and promotes maximum community self-reliance and participation in the planning, organisation, operation and control (of health care programmes). The ability of community members to participate and assume responsibility for their own health and welfare is developed through appropriate education. Institutional arrangements need to be developed through which people can assume responsibility for their health and well-being. The community needs to participate in every stage of PHC from the assessment of the situation, the definition of the problems, the setting of priorities, the planning of PHC activities, keeping the implementation of PHC under constant review and solving problems.

The concept of community participation was briefly discussed in the subheading detailing the WHO and UNICEF definition of PHC. In an ideal situation, the student community via its elected representatives comprising the UCT-SRC would exercise greater participation in the planning, organisation, operation and control of the UCT-SHS. However, as this is a highly complex and professional facility, this laudable goal

would prove difficult to fully implement – especially as the student community is a dynamic, changing one rather than a stable, fixed community. Methods should be found whereby the student community could become more involved in the creation and implementation of suitable educational programmes targeting concerns that have been assessed by the students themselves to be problem areas worthy of intervention. This strategy would increase the level of student empowerment, although budgetary considerations might preclude widespread implementation thereof. Consequently, University authorities, via the Student Health Committee and other relevant fora, should commit themselves to institutional arrangements that encourage the development of capacity building programmes to assist students to assume increased responsibility for their health and well-being.

2.1.2.2 Equity

Services for the under-served need to be accessible. This implies culturally acceptable, affordable, the right kind of care needs to be available on a continuing basis to those who need it whenever they need it, and delivered in a proper manner (functional accessibility), and geographically within easy reach.

On the whole, the UCT-SHS offers a highly accessible service to students although it is closed after 16h30 forcing students with pressing physical or mental health problems to consult regional secondary or tertiary hospitals for such after-hours treatment. The standard of care delivered at the UCT-SHS is professional although the lack of a Black medical officer, nursing sister, psychologist or psychiatrist might preclude the delivery of culturally appropriate health care to students who derive from a traditional African background and exhibit culturally-specific and appropriate psychological or psychiatric symptoms that may not be correctly interpreted by the resident therapist. As the UCT-SHS-MHS, as a general rule, provides students with a maximum of 6 sessions for evaluation and intervention with a resident psychologist before referral to an external facility, the Mental Health Services cannot be judged as being available on a truly continuing basis to students who require prolonged psychotherapy. In addition, although genuine emergencies are catered for at the UCT-SHS-MHS, there is generally a 1 to 2 day (or more) waiting list for patients with mental health problems that are assessed as non-emergencies to see a psychologist for relevant evaluation and/or therapeutic intervention. The UCT-SHS, although off main campus, is close to many of the major University-administered residences so that geographical location should not present a major problem to students seeking treatment.

2.1.2.3 Integration within the health system

PHC encompasses promotive, preventive, curative and rehabilitative services, and these address the main health problems of the community. In order for PHC to be comprehensive, all development-orientated activities should be interrelated and balanced so as to focus on the problems of the highest priority as mutually perceived by the community and health system. The health system needs to be organised to support PHC. It should be sustained by integrated, functional and mutually-supportive referral systems. This will

involve undertaking reviewing the organisation of the health infrastructure and reorientation and training at all levels of the system.

The UCT-SHS-MHS should function in an integrated fashion within the University structure by actively liaising with as many academic and non-academic departments as possible. Several of the problems encountered by the University in integrating its various student counselling services (of which the UCT-SHS-MHS is the only professional facility dedicated to student counselling) will be highlighted in the discussion in the review of the structure and function of the University and its departments relevant to the UCT-SHS study – most notably the subheading which documents the proceedings of the subcommittee established by the Student Affairs Committee to review the provision of counselling services in the UCT-SAD/SAF (Student Affairs Department). In order to optimally serve the needs of students presenting with mental health problems, the UCT-SHS-MHS needs to liaise with the academic staff members responsible for tutoring the affected students, so that they can become aware of the presence (and, where appropriate, the nature) of a problem encountered by the student provided such disclosure does not involve the release of confidential information. This free interchange of student-related information would assist UCT-SHS-MHS patients to cope better with the exacting demands of University life. University authorities should actively encourage the development of mechanisms to facilitate the sharing (and consequent pooling) of student records housed in different academic departments and/or student service-orientated facilities to enable all these departments (including the UCT-SHS-MHS in its provision of PHC) to optimise their management of student problems.

2.1.2.4 Health technology

The technologies and methods used should contribute to health, and need to be scientifically sound, adapted to local needs, and acceptable to the community, and they should be maintained by the people themselves, with resources the country can afford. Health technology refers to an association of methods, techniques, and equipment. This should be in keeping with the local culture, and should be capable of being adapted and further developed.

Being a university-based clinic, the UCT-SHS does not require the presence of complex technology and full-time specialist personnel to fulfil its function – the UCT-SHS-MHS relies on the services of sessional psychologists and the weekly visit of a psychiatrist. The subheading dealing with the principle of equity discusses the importance of staff being able to understand the cultural aspects involved in the aetiology and presentation of mental health problems so that they are able to deliver a service that is in keeping with the needs of students of any particular culture. Any shortcomings in this delivery system should be addressed so that the UCT-SHS-MHS can be adapted and further developed to enhance its capacity to deliver PHC to all students in need of evaluation and/or therapeutic intervention. As previously mentioned, the University is limited by budgetary constraints from delivering the full range of PHC services that would entail, inter alia, comprehensive preventive and promotive mental health programmes.

2.1.2.5 Research

In order to improve and learn from PHC experiences, there is a need for organised research that is closely linked to the provision of service. Monitoring and evaluation and research need to be built into the PHC system, and a dialogue needs to be created among all involved with a view to improving PHC and developing the technologies and the organisation.

This aspect of the PHC system is fundamental to the UCT-SHS study which is conducted strictly according to the theory and practice of epidemiological research. This study aims to employ descriptive and analytical epidemiology insofar as the initial objective of this study which seeks to describe students presenting at the UCT-SHS-MHS in terms of selected demographic, academic, residential (home address), financial assistance and clinical (diagnostic) variables is largely in the realm of descriptive epidemiology (with some aspects of analytical epidemiology) while subsequent objectives which seek, inter alia, to compare students presenting at the UCT-SHS-MHS with either students presenting at the UCT-SHS who do NOT present at the UCT-SHS-MHS (controls) or all other students attending the University of Cape Town in terms of selected demographic, academic, residential (home address) and financial assistance variables are largely in the realm of analytical epidemiology (with some aspects of descriptive epidemiology).

Morris (1975) quoted by Isaacs (1990) enumerates the following seven functions of epidemiology: (i) the study of historical trends; (ii) the description of the health of the community; (iii) determination of individual risk; (iv) the study of health services; (v) the completion of the clinical picture; (vi) the identification of syndromes, and (vii) the discovery of cause.

The UCT-SHS study fulfils (or, at least, partially fulfils) six of the seven functions of epidemiology described above by Morris (1975). This study: (i) qualifies as a study of historical trends insofar as it documents attendance patterns at the UCT-SHS-MHS from 1991 to 1993 – trends that should still be highly relevant to University authorities; (ii) provides an indirect description of the health of the total student community insofar as it details the characteristics of a representative sample of the UCT student community; (iii) by employing selected demographic, academic, residential (home address) and financial assistance variables, will determine correlates of presentation that predispose certain students to various mental disorders presenting at the UCT-SHS-MHS; (iv) by investigating attendance patterns, utilisation rates and number of consultations per patient at the UCT-SHS-MHS will fulfil the role of health services research; (v) by assessing the correlates of presentation profiles associated with various psychological or psychiatric complaints presenting at the UCT-SHS-MHS will increase available knowledge concerning the clinical pattern of these mental health problems in a university setting; (vi) would, however, be unlikely to facilitate the identification of mental health syndromes affecting various sectors of the student community, and (vii) could, by employing the correlates of presentation profile outlined above, contribute to the discovery of the cause of certain mental disorders affecting various sectors of the student community.

It is hoped that the results produced by this study and the accompanying suggested recommendations will assist relevant University authorities to implement appropriate strategies and interventive programmes that will enhance the provision of suitable counselling services available to all students registered at the University of Cape Town.

2.2 COMMUNITY PSYCHOLOGY

2.2.1 Definition

> *Community Psychology is regarded as an approach to human behaviour problems that emphasizes contributions made to their development by environmental forces as well as the potential to be made toward their alleviation by the use of these forces.*
>
> (Zax and Specter, 1974: p. 3)

This definition of community psychology emphasises a concern with the role of environmental factors in the causation of psychological distress. However, Flisher (1981) states that this definition is inadequate for two reasons: (i) it is too limited as a description of the activities of community psychologists in that they are not concerned solely with "human behaviour problems", and (ii) it is too general because of its lack of specificity as regards the "environmental forces".

In a similar vein, Reifler, Liptzin and Fox (1967) state that public health psychiatry (as epitomised by college/university psychiatry) is concerned with the scientific diagnosis and treatment of the mental health status and needs of the community. As in treatment of an individual, the treatment of the community should be based upon: (i) knowledge of the nature and distribution of the illness; (ii) understanding of the assets and liabilities of the patient, and (iii) evaluation of the efficacy of the intended treatment. College/university psychiatry focuses as much upon the treatment of the student community as upon those few individuals who have developed psychiatric problems. Therefore, college/university psychiatrists have an interest in the relationship between the individual patient and the collective patient, particularly those factors in the latter which have relevance to the production of distress and disease in the former.

As community psychology (and public health psychiatry) are important components in the provision of PHC to the student community of the University of Cape Town, the comments appearing alongside the definitions and theoretical material linking the concept of PHC to the UCT-SHS study, are equally applicable to this section. Such comments include the acceptance by resident UCT-SHS-MHS therapists of the relationship between presenting psychological (and psychiatric) complaints and various background social and socio-economic factors (including adverse financial and domestic circumstances) pertaining to the individual student. Unfortunately, apart from the provision of limited financial assistance from the University to cover (or help pay toward) basic tuition and residential expenses, there is no other way in which the UCT-SHS-MHS (or the University) can help alleviate these complex background social and socio-economic factors.

2.2.2 Component Facets of Community Psychology

The four facets of community psychology as defined by Lewis and Lewis (1977) have been employed as a conceptual framework by Flisher (1981) in his thesis detailing the development, implementation and evaluation of a training programme in rape crisis intervention for lay therapists and Lazarus (1983) in her thesis investigating the South African Black education system to contribute to changes that would enable individuals to develop a sense of power and community in an attempt to prevent alienation and estrangement. This framework (with minor modifications) will be employed in this section to contextualise the UCT-SHS study within the community psychology approach.

2.2.2.1 The extensive experiential facet of community psychology

According to Lewis and Lewis (1977), extensive programmes are aimed at all the members of a community, although it is not intended that each person be affected very deeply, while experiential programmes provide services directly to individuals by giving community members the opportunity to learn new skills or develop fresh understandings that can help them to live more effectively and more independently, viz. direct experiences available to the population as a whole are provided. The thrust of these interventions is educative. The aim is to share knowledge and skills in order to lessen the need for professional helpers. Educational programmes provide the occasion for individuals and groups to develop awareness and skills that can help them to live more effectively and to deal with their problems more competently.

This facet of community psychology within the University of Cape Town would involve the widespread availability of health education programmes directed at the total student community to increase knowledge of various mental health problems that are potentially widespread on campus. Such knowledge would enable students to develop coping skills to manage academic stress, inter alia, thereby enabling them to avoid adjustment-related conditions to University life which might eventually present at the UCT-SHS-MHS for evaluation and/or therapeutic intervention. This approach would improve the level of functioning (effectiveness) of all students who might be liable to any psychological or psychiatric complaints rather than just individual students who have actively sought assistance from the UCT-SHS-MHS (or other on- or off-campus facilities offering professional interventive programmes). Student self-help groups, based within the student community, should be formed and empowered by receiving appropriate training in order to acquire relevant helping skills. These groups, which could be attached to individual residences and other student organisations, would assist the UCT-SHS-MHS and other student service-orientated facilities to disseminate the above-mentioned health education programmes. An informed student community, free from the burden of minor mental disorders, would be able to devote more time and energy not only to their studies and other academic-related matters but also possibly to various community outreach and upliftment programmes. Therefore, the introduction of extensive health education programmes to increase the mental health and psychological well-being of students would not only benefit the student community itself but also the broader community surrounding the University. In an era when the relevance of Universities and other tertiary

education institutions is being questioned, these activities would serve to enhance both the prestige and relevance to society of the University of Cape Town.

2.2.2.2 The intensive experiential facet of community psychology

According to Lewis and Lewis (1977), intensive programmes are aimed at specific individuals or groups who are identified either by themselves or by others as being in need of special assistance with the intervention being intended to have a more significant impact on their lives than is the case for extensive programmes, while experiential programmes provide services directly to individuals by giving community members the opportunity to learn new skills or develop fresh understandings that can help them to live more effectively and more independently, viz. special experiences to individuals or groups that need them are organised. These interventions are particularly important for people who are downgraded or oppressed in any way.

This facet of community psychology within the University of Cape Town would, inter alia, focus on historically disadvantaged Black students who, because of their unique position in society due to the legacy of apartheid (including their general state of educational under-preparedness), would appear to be at increased risk of a host of mental health problems – including academic stress and adjustment-related problems to University life. Initiatives (including appropriate self-help and volunteer programmes) to assist such students in the recognition of symptoms associated with various mental disorders should be developed to complement existing facilities such as the UCT-ADP (formerly known as the UCT-ASP) which was instituted by concerned University authorities in an attempt to redress the above-mentioned educational imbalance. Once affected students have recognised the presence of such symptoms, they must be aware of appropriate measures to take (including where to seek advice) in order to prevent underlying psychological (or psychiatric) complaints from causing increasing impairment of levels of social and academic functioning. Often, by necessity, students affected by these complaints eventually present with severe and long-standing psychopathology at the UCT-SHS-MHS for evaluation and/or therapeutic intervention (including crisis intervention) during the course of mid-year and end-of-year examinations. Students who fulfil the demographic, academic, residential (home address) and financial assistance profile (as measured by a series of selected variables) assessed by the UCT-SHS study results to predispose students to (certain) mental disorders (viz. risk profile assessment) should be actively sought and offered prophylactic (preventive and promotive) counselling. The strategy should serve to reduce the number of patients requiring crisis intervention, thereby enabling the UCT-SHS-MHS to dedicate its limited resources to the treatment of a greater number of sub-acute conditions which would, generally, require less intensive therapy.

2.2.2.3 The extensive environmental facet of community psychology

According to Lewis and Lewis (1977), extensive programmes are aimed at all the members of a community, although it is not intended that each person be affected very deeply, while environmental programmes deal with the community setting so that by intervening in the environment, changes are brought about that have a beneficial effect on the individuals that form part of that environment, viz. the entire community is made

more responsive to the needs of all its members. These interventions deal with conditions in the community that may hinder the personal development or growth of its members. Community members are involved in social planning and in the planning, implementing, and evaluating of community needs and programmes.

This facet of community psychology within the University of Cape Town would involve educating all students about the presence of various on-campus service-orientated facilities that function to assist them with a variety of academic and non-academic problems – such facilities include, inter alia, the UCT-SHS itself, the UCT-SADC (Student Advice and Development Centre), the UCT-UFAO (Undergraduate Financial Aid Office), the UCT-SHO (Student Housing Office), and the UCT-ADP (Academic Development Programme). If all students were aware of the availability and function of these (and other related) facilities, there would, in all likelihood, be a substantial reduction in anxiety and stress consequent to unresolved academic and non-academic problems which could promote the development of various adjustment-related conditions requiring evaluation and/or therapeutic intervention of the UCT-SHS-MHS. If left unattended, these conditions could lead to impairment of academic performance which, if severe enough, could lead to academic exclusion from the University – although in the case of the borderline educationally under-prepared student the degree of impairment need not be great. An important aspect to the successful implementation of this facet of community psychology within the University would be the support and involvement of the UCT-SRC in its capacity as the elected representative body of the student community The UCT-SRC should, therefore, be aware of the presence and nature of academic and non-academic problems affecting their constituency and could, thereby, play a leading role in the initiation, management and assessment of suitable interventive programmes in conjunction with appropriately qualified professional staff – including psychologists attached to the UCT-SHS-MHS.

2.2.2.4 The intensive environmental facet of community psychology

According to Lewis and Lewis (1977), intensive programmes are aimed at specific individuals or groups who are identified either by themselves or by others as being in need of special assistance with the intervention being intended to have a more significant impact on their lives than in the case for extensive programmes, while environmental programmes deal with the community setting so that by intervening in the environment, changes are brought about that have a beneficial effect on the individuals that form part of that environment, viz. the environments of specific individuals or groups are intervened in so that their special needs can be met. These interventions are achieved by advocacy on behalf of individuals or groups, and consultation.

This facet of community psychology within the University of Cape Town could be achieved through the process of consultation whereby the UCT-SHS-MHS would maintain the services of a consultant whose function would be to assist the resident sessional psychologists and psychiatrist (the consultees) to deliver a more appropriate and, thereby, meaningful service to its patients. UCT-SHS-MHS patients include, inter alia, students who derive from a traditional African background who exhibit culturally-specific and appropriate psychological or psychiatric symptoms that may not be correctly interpreted by resident therapists. This interactive process involving the communication of knowledge, skills and attitudes

(Bindman, 1959, quoted by Flisher, 1981) would enable the UCT-SHS-MHS to deliver a more professional service to all members of the total student community. Advocacy for disadvantaged student communities could be conducted through special interest groups constituted to address issues of common concern – examples of such special interest groups include the Equal Opportunity Officer (Mr F. Molteno) together with the Equal Opportunities Research Programme (now the African Gender Research Institute) and the UCT Woman's Movement, who could actively campaign for and promote programmes to address real or perceived concerns affecting members of their respective constituencies. This method of attending to issues of common concern would succeed in enhancing the well-being and, thereby, the mental health status of large groups of students as opposed to UCT-SHS-MHS therapists catering to the diverse needs of individual students requiring professional assistance.

2.2.2.5 Summary

Community psychology programmes in the university setting would include total university environment, curriculum improvement, teaching techniques, problem-solving strategies, lecturers' attitudes and relationships with students, structure of the university and lecture theatre and the aims of education (Rappaport, 1977; Roen, 1967; Zax and Specter, 1974).

Tables 2.1 and 2.2 below, further detail the four facets of community psychology outlined by Lewis and Lewis (1977) by providing concrete examples of interventive programmes positioned in the extensive experiential, intensive experiential, extensive environmental and intensive environmental facets of community psychology. Flisher (1981) notes that these four facets complement each other and are not mutually exclusive. On the one hand, Table 2.1 provides a fairly general overview of these individual facets of community psychology by documenting various interventive programmes that can be conducted within the general community which would, naturally, include the UCT student community. On the other hand, Table 2.2 provides a more specific overview of these individual facets of community psychology by detailing various interventive programmes that are directly relevant to the context of the UCT student community in which the UCT-SHS study is conducted. Therefore Table 2.2 serves to exemplify the data previously documented in Table 2.1.

Table 2.1 The four facets of community psychology (from Lewis and Lewis, 1977, modified by Flisher, 1981).

	EXTENSIVE	INTENSIVE
EXPERIENTIAL	Educational programmes. Training in helping skills. Assistance to self-help groups and programmes.	Creation of self-help and volunteer programmes for specific populations. Facing and preventing crises. Accessible counselling services: volunteer, paraprofessional and professional.
ENVIRONMENTAL	Community planning and development. Community action for change.	Linkage with a helping network. Consultation with other helpers. Advocacy on behalf of individuals and groups.

Table 2.2 The four facets of community psychology (from Lewis and Lewis, 1977) with respect to the UCT-SHS study.

	EXTENSIVE	INTENSIVE
EXPERIENTIAL	Mental health awareness programmes. Advertising the role of the UCT-SHS-MHS.	Walk-in clinic at UCT-SHS-MHS for crisis intervention.
ENVIRONMENTAL	Highlight socio-economic problems affecting historically disadvantaged students including inadequate schooling and shortage of bursaries.	Consultation with peer counsellors, residence wardens, tutors, lecturers and the UCT-SRC.

As previously mentioned in the foreword to this section, the conceptual background, together with practical interventions, depicted in Tables 2.1 and 2.2, have been employed to contextualise the UCT-SHS study within the community psychology approach.

2.3 CONCLUDING COMMENTS

The UCT-SHS study either directly or indirectly touches upon a number of academic fields, social issues and public health research topics (refer to Table 2.3). The description of "central" is employed to denote that the particular academic field, social issue or public health research topic is regarded to constitute an integral part of this study. On the other hand, the description of "peripheral" demonstrates that the particular academic field, social issue or public health research topic is only indirectly addressed by this study.

Table 2.3 List of selected academic fields, social issues and public health research topics addressed by the UCT-SHS study.

Topic (addressed by UCT-SHS study)	Position (relative to UCT-SHS study)
(a) Selected academic fields	
Basic and Applied Epidemiology	Central
Basic and Applied Psychology	Central
Basic and Applied Psychiatry	Central
Basic and Applied Sociology	Peripheral
(b) Selected social issues	
Primary Health Care Issues	Central
Student Affairs Issues	Central
Social Work issues	Peripheral
(c) Selected public health research topics	
Epidemiology and Disease Control	Central
Primary Health Care	Central
Health Statistics and Information Systems	Central
Health Service Development	Central
Environmental Health	Peripheral

Chapter 3

LITERATURE REVIEW

This chapter is divided into three sections. The first section provides a brief review of the interaction between the student and the college/university – including factors leading to successful and unsuccessful adjustment to college/university. This section also briefly documents the cause, effects and burden of mental illness affecting students – including the incidence and prevalence of mental disorders at various colleges/universities as reported in the literature. The second section details the role, structure and services offered by the student (mental) health service – including therapeutic principles employed such as brief psychotherapy and cross-cultural psychotherapy. This section also compares users and non-users of student mental health services – including various differences and similarities between these two cohorts as reported in the literature. The third section, which further develops the preceding background material, is more specific as it relates directly to overall student attendees as well as the selected demographic, academic, residential (home address), financial assistance and clinical (diagnostic) variables investigated in this thesis. The contents of the subsections relating to each of these variables (including the clinical/diagnostic variable which is incorporated into the overall attendees, gender and race/population group subsection/subheadings) contains a composite table detailing attendees, usage/utilisation rates per 1 000 students and mean number of consultations per patient as obtained from individual studies/samples reported in the literature.

3.1 THE STUDENT AND THE COLLEGE/UNIVERSITY

The main thrust of this section of the Literature Review is to review the literature on the interaction between the student and the college/university, although occasional reference will be made throughout as to how the UCT-SHS-MHS (previously described in Chapter 1) corresponds to this material. This section is divided into four subsections. The first subsection provides an overview of the student who represents the subject of the UCT-SHS study. Adolescent psychological development, including Erickson's theory of human development, is outlined as the majority of students registered at UCT are still in this (or the immediate post-adolescent) stage of human development. The second subsection briefly documents the goals/function of the college/university, which represents the environment in which this research is conducted. These include the provision of optimal facilities to ensure optimal student development – both personal and academic. The third subsection links the preceding subsections by detailing student adjustment to college/university. Areas addressed include the challenges of college/university for the school-leaver which are often in conflict with normal adolescent psychological development. Special reference is made to historically disadvantaged Black students, who often face additional challenges than their peers, where

stage models of racial identity, relevant psychosocial and educational factors as well as academic performance and the role of the Academic Support Programme (ASP) are outlined. Features associated with successful adjustment to college/university include academic selectivity and social integration. Student needs assessments conducted both locally and abroad highlight problems affecting students. If left unattended these problems could give rise to unsuccessful adjustment to college/university. This can manifest as a state of learned helplessness, dissatisfaction with college/university, a state of racial tension and alienation and withdrawal from the college/university and is often associated with mental illness in students. The individual subheadings outline a functional definition of mental illness, precipitating factors, consequences of mental illness (including academic impairment, the formation of pathological supportive sub-systems and withdrawal from college/university) and incidence and prevalence rates (predominantly from American tertiary educational institutions) reported in the literature as well as an "at risk" profile of freshman/fresher students who were found to be moderately to severely mentally impaired. The fourth subsection is a summary specifically linking the preceding material to the context of this thesis.

3.1.1 Adolescent Psychological Development

Erikson's (1950, 1956 and 1959) theory of human development, in which personality develops over a series of psychosocial stages, provides a useful explanation of human development during the stages of adolescence and young adulthood which are relevant to students. Erikson (1963) cast his theory within the framework of social experience, which he saw as moulding the impact of biological urges and interacting with them to form social modes of instinctual thinking. He claims that the major task confronting the adolescent is the development of a sense of one's own identity, of what defines one as a person. The search for identity involves deciding what is important or worth doing and formulating standards of conduct for evaluating one's own behaviour as well as the behaviour of others. The adolescent's powers of formal operational thinking allows him/her to (i) analyse different roles; (ii) observe inconsistencies and conflicts in some of the roles, and (iii) restructure the roles to form a new identity. This process often requires abandoning old roles and establishing greater autonomy from parents and relatives.

One aspect of identity is self-concept. Burns (1982) envisages self-concept (as it pertains, inter alia, to the student) as arising from a number of perspectives: (i) the cognised self which is the individual's perceptions of his/her abilities, status and rules, i.e. it is his/her concept of the person he/she thinks he/she is; (ii) the other or social self which is how the individual believes others see and evaluate him/her, and (iii) the ideal self which is the kind of person the individual hopes to be or would like to be. A lack of synchronicity (mis-match) between any one of these perspectives which clearly form the basis to the development of a sense of identity could predispose any student to a host of adjustment disorders requiring evaluation and/or therapeutic intervention at the UCT-SHS-MHS. In addition, Howcroft (1986) notes that the self-concept develops out of the interaction between the individual and his/her environment. During

this interaction experiences in a community or situational context are evaluated – this evaluation being based mainly upon subjective standards that can lead to either high or low esteem of the self.

Feinstein quoted by De Armond et al. (1973) notes that the college/university years are a transitional time in personality development; the adolescent becomes an adult, family relationships shift from parent-child to adult-adult, social relationships escalate from youthful game-playing to serious intimacy, values for life are appropriated which fit one as a unique individual, and a mature sexual identity emerges from adolescent confusion. These transitions involve all aspects of the individual's identity and, in fact, form the basis of the mature, adult identity. The attainment of this adult identity may be preceded by a certain degree of experimentation by the student with his/her self-concept during the transitional time spent at the college/university. However, Wright-Short (1967) notes that it is the misfortune of the university student that his/her period of dependency on his/her parents is prolonged, and even when this is not emphasised by the parent or openly resented, it does not accord with the urgent desire for independence which is proper to early adult life. The hostilities which always accompany dependency are sometimes not recognised by either parents or children, so that guild and its stultifying effects express themselves in the young person's attitude to study.

Wig, Nagpal and Khanna (1971) state that adolescent growth is usually accompanied by heightened intensity of feeling and constant tension between controlling and expressing instincts. The strength of the instinctual forces and the relative weakness of capacity to deal with them, together with needs for independence and self-expression and the special strain of higher education, produce a type of reaction that is typically characteristic of young students. The authors observe that the emotionally healthy student withstands such strains of growing up and may even make it a stepping-stone for self-integration, but the vulnerable student gives way and exhibits physical or psychological symptoms characterised by personality problems and adjustment reactions. For the growing adolescent, there is already a tremendous biological load to which he/she tries to adjust and to this struggle within, is added the additional load of competing in the mastery of a subject or subjects. Wig, Nagpal and Khanna (1971) note that learning is essentially a faculty of the prepubertal stage of development and on gaining physical maturity the man/woman in the more natural state wants to become independent and to get settled in life. His/her modus operandi becomes outgoing rather than in-taking. But by prolonging this period of learning taking in, youth is perforce to continue with a period of psychological childhood. This commentary is in agreement with that previously raised by Wright-Short (1967).

3.1.2 The College/University

> *Communities, like men, are in some ways like all others, in some ways like some others, and in some ways like no others. College (university) communities, despite the characteristics which make them unique, also have characteristics from which generalizations can be made.*
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> (Reifler, Liptzin and Fox, 1967: p. 670)

This statement confirms that all colleges and universities possess common structures and functions that enable certain comparisons to be made – such as student utilisation patterns of mental health services. The same authors suggest that consistent findings (with respect to information available in the literature about student health) can be assumed to represent problems of the college/university student group. When there are divergences it would seem that some factor or factors in the social system of the individual institution should have first priority for study.

According to Hersh, Nazario and Backus (1983) the college/university community is a dynamic organism whose properties are in constant motion and change. This activity is directed and integrated to absorb new and diverse parts. Students are the major elements of this dynamic organism and their enormous momentum and expansion potential are important sources of energy and attention. The successful interaction between these major elements and the other properties of the organism is vital for homeostasis and growth. In admitting students to study, the university undertakes to provide the necessary education and supportive environment to achieve their academic goals. As an academic institution, the campus is a place where teaching is conducted, learning is engaged in, knowledge is forged and ideas contested. As a social institution, the campus is a community where people gather, interact, deal with developmental tasks, and living in all its manifestations takes place. As a microcosm of the society in which it is situated, it is said that the university community reflects prevailing demographic and social patterns (Naidoo, 1997).

3.1.2.1 Goals/function

> *Universities are ... places where large numbers of people (students and staff), live, love, learn, work and play. It is a place where large numbers of young people are concentrated, spending a few months to several years in the institution. Many students live in university residences, establish social networks and relationships, pursue academic learning and training, undertake part-time jobs, participate in social activities and events, all within the university. Universities as settings bring together students from different social, educational, cultural and economic backgrounds among other differences. It is also a place where young people learn life-skills, make decisions for their future, and develop independence through living away from home.*
>
> (Mukoma, 1999; p.35-36)

This commentary provides an extremely eloquent overview of not only the goals and function of a tertiary educational institution but also the range of activities associated with the individual student's pursuit of a higher education. It is the duty of relevant University authorities to promote the optimal development of each and every student attending the University of Cape Town and to make it possible for them to successfully participate in the myriad of social and academic activities that are available to them. The specific recommendations (refer to section 6.4 for further details) document, inter alia, measures that the Student Development and Services Department (UCT-SDSD) can implement in order to facilitate the successful integration of students within the University. In this way, UCT will be better able to fulfil the goals and functions of a tertiary educational institution.

Loeb and Magee (1992) report that the contemporary college or university is seemingly expected to help foster the development of adult characteristics, attitudes, and beliefs. Unlike the family or the church, its function in this process typically is not to prescribe, to proscribe, or to inculcate but rather to provoke and prod, to raise questions it does not seek to answer and to offer alternatives without providing a preferred choice. The college/university is to provide an environment that stimulates and nurtures change in personal characteristics as well as in social or topical attitudes without necessarily determining the direction of such change. Therefore, education should help students with their intellectual as well as emotional growth (Yue, 1989).

In order to achieve optimal intellectual growth, Weislogel (1977) points out that it is the task of colleges and universities to develop environmental situations that enhance the students' academic potential performance to the fullest – bad university environment conditions (e.g. type of residence and student accommodation) negatively affect performance (Taylor and Hanson, 1971). Likewise, Tinto (1987) notes that in accepting individuals for admission, institutions of higher learning necessarily accept a major responsibility to ensure, as best they can, that all students without exception have sufficient opportunities and resources to complete their courses of study should they so wish. Therefore, departure from college or university mirrors the absence of social and intellectual integration into the mainstream of community life and the social support such integration provides.

However, the Report of the World Health Organisation (WHO) Symposium on Student Health Services (1966) presents a less than ideal picture of the role of colleges and universities in investigating student (mental) health problems. It observes that it is somewhat paradoxical that departments and institutions devoted to the advance of knowledge by research and experiment have so little interest in applying these methods to their own activities. One reason forwarded may be that a process of self-appraisal for an organisation (as for an individual) is apt to be an uncomfortable business. Another is that research on these lines needs to bring together different dimensions – clinical, psychological and psychometric data have to be brought into relationship with the sociological and educational aspects of the problem. Too often, studies are pursued from a restricted standpoint and conclusions and applications are thereby limited.

In conclusion, Dooris (1996), quoted by Mukoma (1999), states that a university should function as a centre of creativity and innovation expressed in the process of learning, combining and managing knowledge and understanding within and between disciplines, and in applying this knowledge and understanding both within and outside the university's institutional processes.

3.1.3 Student Adjustment to College/University

> *There are many influences on students' adjustment to their new environment at the university. Accidental experiences, administrative regulations, the material environment and academic performance all play significant roles in this transition period. However, it seems that possibly the most important factor could be the opportunity and ability of students to establish warm, supportive interpersonal relationships.*
>
> *They are helped, or hindered, in these endeavours by their orientation into the university, and by their attitudes to the facilities that UCT provides. For many students, being in residence, playing sports and belonging to societies provide the friendships and human interactions that are necessary for social and emotional wellbeing. For many reasons, both personal and practical, others cannot enjoy these pursuits, and loneliness, alienation and ill-health often result. Whatever the position for the university student is regarding social relationships, these are as significant a part of his life as are his physical and intellectual circumstances.*
>
> (Honikman, 1982; p. 237)

This statement from a masters thesis documenting the processes and problems affecting first year students attending the University of Cape Town provide an extremely relevant (and local) background commentary to this subsection by highlighting circumstances impacting upon students' adjustment to the college/university. The author, although stressing the importance of supportive interpersonal relationships, still emphasises the role of the tertiary educational institution in facilitating this process by providing students with user-friendly services and facilities that are appropriate to their needs. Such a student-orientated environment should prove conducive to both the physical and mental well-being of the student body. Conversely, an institution with less sympathetic administrative regulations and systems could be inadvertently responsible for promoting a sense of loneliness and alienation amongst susceptible members of the student community. This could, in turn, promote the development of psychological or psychiatric complaints which would further negatively impact on the student's college/university experience. Therefore relevant college/university authorities can play an important role in ensuring that all students are able to derive maximum benefit from their tertiary education by achieving an early and successful adjustment to their new environment.

3.1.3.1 Challenges of college/university

This subsection is divided into four subheadings. The first subheading outlines the wide variety of challenges that the college/university presents the school-leaver who is moving from an environment where requirements are clearly defined to one which is permissive and imposes few rules for personal behaviour. A general overview is followed by a fairly comprehensive analysis of the specific factors that are relevant to the adjustment of historically disadvantaged Black students to the college/university. The tertiary education environment is often found by these students to differ widely from their previous experience and cultural backgrounds. This is particularly relevant to the University of Cape Town whose predominantly Eurocentric culture is often in conflict with the traditional background of many of its students. Information relating to a variety of stage models of racial identity together with relevant psychosocial factors that are relevant to the adjustment process to the college/university is introduced. Further educational factors as well as academic performance and the role of the Academic Support Programme (ASP) are also included as they constitute very real factors to the success of not only these students' adjustment but also their chance of ultimate academic success. The second subheading provides a fairly detailed description of student needs assessments conducted in developed (first world) countries, Southern African countries (excluding metropolitan Cape Town) and in metropolitan Cape Town itself. The third subheading outlines manifestations of successful adjustment to the college/university which include academic selectivity and social integration. The fourth subheading expands upon the preceding material by detailing corresponding manifestations of unsuccessful adjustment to the college/university. These more varied manifestations include a state of learned helplessness, dissatisfaction with college/university, a state of racial tension and alienation and withdrawal from the college/university and are often associated with mental illness in students. The fifth subheading comprises a short set of concluding comments which endeavour to contextualise the contents of this subsection.

(a) General overview

Loeb and Magee (1992) observe that college/university students are often moving from a high school where they achieved a good degree of success and received much approbation to a university where their performance may be marked by less academic success and fewer accolades, at least in the beginning. Perhaps, the authors note, it is necessary for the student to fall back, to lose some bravado, to experience doubt and conflict, before he/she can experience growth.

Smit (1971) states that it is generally accepted that the college/university environment is different from what the average student expects. For some/most students: (i) it will be the first time that they live away from the home environment; (ii) they have more personal freedom with much less external discipline; (iii) they have moved from a position of relative seniority at school to a junior position at university, and (iv) they are also expected to take their own decisions relating to such matters as the amount of time allocated to study, sport and social engagements. The author, therefore, believes that even the best

balanced student must experience times of insecurity in view of his/her lack of experience in handling the new situation. This would result in a lack of synchronicity (mismatch) between the three perspectives of self-concept (viz. the cognised self, the social self and the ideal self) envisaged by Burns (1982) which form the basis to the development of a sense of identity. This could, in turn, predispose the student to various mental disorders. In fact, Venter (1980) asserts that there is a high and increasing incidence of depression among first year students.

Likewise, Wright-Short (1967) states that university, in contrast to school where requirements are clearly defined and sanctions familiar if capricious, is permissive and imposes few rules for personal behaviour. This very latitude results in feelings of insecurity and consequent anxiety. Examinations further enhance anxiety, and may provoke a depressive reaction. A depressive reaction, the occurrence of which may not always be easily recognised, may inhibit study completely, and as work falls further into arrears, so may the illness intensify. The author concludes by noting that not all the mental disturbances affecting students are related to the undergraduate life as such, but that there are a considerable number of causes of mental upset which are closely associated with the university. Neurotic anxiety of such a degree as to interfere with, or inhibit, study presents with protean symptomatology and it may be related to: (i) parents, so far as dependence and hostility are concerned; (ii) authority, particularly in relation to academic requirements, and (iii) peers, so far as both social and sexual adjustment may be affected by the conditions of student life.

Taking a somewhat more positive viewpoint, Coelho, Hamburg and Murphey (1963) note that the transition from high school to college/university presents not only potentially stressful demands but also stimulating opportunities for the adolescent to master certain tasks that are significant for his/her personal growth. These tasks include: (i) learning new academic skills and intellectual competencies required by the higher educational process; (ii) developing close and meaningful friendships as well as productive work-relations with one's peers; (iii) dealing with physical separation from one's family and regulating one's need for autonomy and relatedness to parents; and (iv) extending one's heterosexual interests and feelings in preparation for courtship and marital decisions. These tasks, according to the authors, are meaningful and ego-involving, for they include what is expected of him/her by: (i) his/her peer group; (ii) the college/university faculty; (iii) his/her parents, and (iv) self-expectations developed earlier in the course of becoming an adult.

Furthermore, Coelho, Hamburg and Murphey (1963) note that the adolescent is exposed to complex new intellectual and technical challenges in college/university: (i) new subject matter in unfamiliar fields of knowledge; (ii) heavier course loads and more demanding intellectual work; (iii) new ideas and techniques to be mastered under pressure of periodic examinations and deadlines; (iv) assignments requiring greater initiative and organising ability; (v) new fields of knowledge that have no immediate vocational application; (vi) diverse college/university responsibilities requiring self-regulation in organising time and activity, and (vii) the cumulative demands of campus life, curricular and extra-curricular, often requiring

considerable autonomy in making decisions that often involve long-range and irreversible commitments. Honikman (1982) also highlights the necessity for students to cope with different teaching styles with the resultant need to adopt different learning procedures and the generally impersonal teaching environment due to big classes leading to little chance of contact with either lecturers and other students. The author states that when these factors affect students at a time when they are already undergoing the trying emotional and social adjustments associated with adolescence, levels of confusion and insecurity as well as contingent problems are increased.

(b) Black students

> *There are many potential student reactions to the academic and non-academic demands of the university environment. The student might meet or overcome them (by developing skills and competencies); he might circumvent them (by forming Black ghettos or developing Black curricula within the university); they might cause his defeat (by furthering psychopathology or forcing him to leave the university).*
>
> (Hedegard and Brown, 1969: p. 144)

It is clearly the duty of relevant University authorities to promote the first reaction by ensuring that all historically disadvantaged Black students admitted to the University of Cape Town are provided with every opportunity to develop the necessary skills and competencies that are required to successfully adapt to the often exacting demands of the tertiary education process. The proposed role of the UCT-SHS-MHS in facilitating the adjustment of these students to a foreign and often hostile environment will be highlighted throughout this research work. The rationale behind the development of pathological support sub-systems (as outlined in the second reaction) is further explored in section 3.1.3.4 which documents manifestations of unsuccessful adjustment to the college/university. The role of various mental disorders in causing sufficiently severe academic impairment in these educationally disadvantaged students as to lead to exclusion from the University on academic grounds (as outlined in the third reaction) will also be highlighted throughout this research work.

Adolescents from groups other than the dominant cultural group are frequently faced with conflicting values and expectations which they must integrate into their identity (Erikson, 1963 and 1968; Mendelberg, 1983; Mussen, Conger and Kagan, 1974). On the one hand, they are faced with the values, expectations and ideals of the dominant culture and on the other, with the characteristics and social attributes of their own group which separate them from the dominant culture. In this vein, Henderson (1987) notes that the Black student experiences the same stress and transitional difficulties as do White students, but to this may be added the stresses associated with his/her particular racial identity.

(i) Stage models of racial identity

Various stage models of racial identity development which view racial identity as a developmental process through which an individual can move from one level to another during his or her life have been developed. Several of these have been outlined by Sekhute (1994) in her thesis detailing an exploratory investigation of racial identity and self-esteem among Black university students attending the Medical University of Southern Africa (MEDUNSA). The author notes that it makes sense to perceive racial identity as occurring along a continuum, whereby movement or oscillation is possible (especially when taking into account the dynamic nature of the human psyche). Most of the stage theories describe more or less similar stages and accompanying characteristics – the main differences among them has to do with the names given to the stages as well as the particular order according to which the stages follow one another.

The following are three of the most recently developed stage models of racial identity development (from Helms, 1990, quoted by Sekhute, 1994):

- Banks (1981): (i) ethnic psychological captivity where the person internalises society's negative view of his/her ethnic group; (ii) ethnic encapsulation where the person participates with his/her own ethnic group which is idealised; (iii) ethnic identity clarification where the person learns to accept himself/herself; (iv) bi-ethnicity where the person possesses a healthy sense of identity and can function in ethnic and White culture; (v) multi-ethnicity where the person is self-actualised and can function beyond superficial levels in many cultures, and (vi) globalism and global competency where the person can use universal ethnic knowledge to function within ethnic groups world-wide.
- Gay (1984): (i) pre-encounter where ethnic identity is subconscious or subliminal or dominated by Euro-American conceptions of ethnic identity; (ii) encounter where an experience or event shatters the person's feelings about ethnic group or self and causes the person to search for new foundations for an identity, and (iii) post-encounter where the person experiences and exudes inner security, self-confidence and pride in one's ethnicity.
- Helms (1990): (i) pre-encounter with idealisation of Whiteness and denigration of Blackness; (ii) encounter where the person confronts the reality that no matter how hard he/she and other Black individuals try to conform to White standards, they will always be perceived as Black and thus inferior; (iii) immersion/emersion where the person idealises Blackness and denigrates Whiteness, and (iv) internalisation where the person internalises a positive Black identity and he/she can also re-establish relationships with White associates who merit such relationships and can analyse the White culture for its strengths and weaknesses.

Other models have been proposed by Cross (1971), Jackson (1975), Milliones (1980), Thomas (1971) and Toldston and Pasteur (1975).

It is noteworthy that all these stage models of racial identity development have been derived from the collective experiences of the African-American (Black) population in the USA. Although many authors have addressed the effect of racism and apartheid on the local South African Black population (e.g. Biko, 1978; Bulhan, 1977 and 1980; Foster, 1986; Manganyi, 1973, 1977 and 1981), the South African literature does not appear to detail corresponding (competing) locally derived stage models of racial identity

development. This observation is confirmed by Professor D.H. Foster of the Department of Psychology, University of Cape Town (personal communication).

Despite this gap in the available literature, this aspect of racial development is of great relevance to the historically disadvantaged Black student attending a Eurocentric tertiary education institution (such as UCT) as any adjustment disorders to the University could be clearly linked to a problem with his/her racial identity. Berry (1975), in a study of social and cultural change and the psychological dynamics thereof, contrasted individuals in transition with those who had already changed or who remained unchanged. The former were more likely to: (i) be affected by greater discontent; (ii) feel more aggressive; (iii) be more ambivalent toward outsiders associated with the new ways, and (iv) be sensitive to other people.

(ii) Psychosocial factors

Gibbs (1975) notes that areas in which Black students were more likely to experience stress than non-Black students are apparently related to their marginal ethnic identity and socio-economic status, and to cultural attitudes and behavioural patterns resulting from this dual marginality. Pierce (1968) states that marginal status creates anxiety and concomitant dysfunctional psychological manoeuvres for the Black adolescent in an interracial environment. Therefore, problems relating to autonomy, aggression and impulse control, and heterosexual and interpersonal relationships among Black students reflect the psychodynamic consequences of socialisation into the Black working-class family and community (Rainwater, 1967; Schulz, 1969). Similarly, Alston (1974) notes that a seemingly large number of minority students presented complaints of symptoms, feelings, or behaviours that were linked to situational or cultural factors. That is, in initially presenting their view of their distress, they often cited a situational difficulty which, if changed, would (they felt) alleviate the problem, or they immediately mentioned some aspect of their racial or ethnic difference as a cause of their problem.

According to a study conducted by Malefo (1995) at the University of Natal, Pietermaritzburg, some sources of stress for Black students in predominantly White colleges/universities include: (i) racial discrimination; (ii) having few Black classmates (Fleming, 1984; Nettles, 1988); (iii) constricted or distant relationship with faculty (Kleeman, 1994), and (iv) perceived lack of social support (Fleming, 1984). Prillerman, Myers and Smedley (1989) refer to the "problematic person-environment fit" between Black students and the social/academic setting of the predominantly White colleges/universities. The authors state that whether Black students are able to cope successfully in high-status college/university settings would appear to depend not only on their personal attributes and resources but also on whether appropriate resources exist for them at the college/university and whether they have effective access to and can use the resources of the college/university. "Minority status stressors" (Prillerman, 1989) among Black students in predominantly White colleges/universities include factors such as social and academic isolation which have been found to impact negatively on the performance outcomes of these students (Fleming, 1984; Jocelyn, 1991; Leon, 1987). It would appear that a "supportive community" which comprises not only of the students' peers, but

also of other members of the college/university staff such as professional counsellors offering "responsive counselling services" (Fleming, 1984) and lecturers can serve as a useful support system that would mediate the stress experienced by these students (Malefo, 1995).

Howcroft (1986) observes that the high level of defensiveness (as measured on the MMPI Lie Scale) among Black University of Fort Hare students may be interpreted as indicative of an over-evaluation of their own worth and a strong need for approval. According to Graham (1977) such a level of defensiveness may be indicative of individuals who are: (i) utilising repression and denial excessively; (ii) conventional and socially conforming; (iii) unoriginal in thinking and inflexible in problem solving; (iv) rigid and moralistic, and (v) poorly tolerant of stress and pressure.

An integrative conceptual model to account for stress, coping and adaptation of Black students attending predominantly White colleges and universities developed by Prillerman, Myers and Smedley (1989) has been outlined by Malefo (1995) in her thesis investigating the influence of family environment, life stress and coping strategies on academic performance among African women students at the University of Natal, Pietermaritzburg. It delineates the assumed interplay of socio-cultural and psychological processes in the adjustment and achievement of these students. This model identifies seven variables that are thought to influence adaptational outcome among Black students in predominantly White universities. They are: (i) socio-demographic factors which include variables like gender, race/population group, socio-economic status and degree of previous exposure to people of other racial groups; (ii) individual predisposing factors which include factors perceived as traditional predictors of college/university preparation like matriculation aggregate; (iii) developmental period of the students which include issues like establishing interpersonal relationships, identity formation and development of autonomy from one's family; (iv) general acute and chronic stressors which include the sources of stress experienced by many college/university students like financial difficulties, academic pressures and living in residence; (v) coping processes which include specific coping behaviours, the availability, use and satisfaction with social support networks and the cognitive appraisal of the stresses faced by individual students; (vi) minority student stressors (stressful occurrences that are perceived and attributed to being an ethnic minority student at a White college/university) which include experiences of racial discrimination, as well as "chronic features of the content" like having few Black classmates, and (vii) socio-cultural orientation which is based on the four patterns of adaptation among Black students as identified by Gibbs (1974) – assimilation, withdrawal, separation and self/group affirmation – as an index of the adaptational styles developed by Black students to cope with the stresses of a multiracial environment which include racial identity conflict, racial conflict, as well as pressures for Black students to become fully assimilated into the dominant majority culture.

Malefo (1995) notes that the initial three variables are important background factors (precursors) which are considered to influence the stressful experiences of college/university students whereas the fourth and fifth variables constitute the "generic" pathway by which stress is hypothesised to effect performance outcome while the sixth and seventh variables constitute a minority-status pathway which reflects what is perceived

as the unique experiences of Black students at White colleges/universities. Adaptational outcomes (products of the stress-coping process) include functional outcomes like academic performance and achievement, psychological outcomes like depression and anxiety or sense of well-being and physical outcomes like somatic symptoms.

Likewise, Van Zijl and Fouche (1983) observe that the Indian student in the Western academic environment has to cope with a variety of problems including: (i) the backwards and forwards transition from one culture milieu to another, and (ii) an attitude and approach to learning acquired in the course of his/her early education in the home culture which conflict with those expected of him/her in a Western university (Noesjirwan, 1970) – the student has been trained to accept authority uncritically and as a result his/her approach to learning is mechanistic and heavily dependent on memorisation without the initiative and critical faculty expected in a Western college/university.

(iii) Educational factors

Elkind (1971) lists the continuities encountered, in America, by Black students who go from ghetto schools to predominantly White middle class colleges/universities as: (i) lack of preparation on the part of White college/university teachers/lecturers for dealing with Black young people; (ii) confusion on the part of teachers/lecturers and administrators with regard to education and racial prejudice, and (iii) lack of Black male teachers/lecturers to serve as role models for Black students. Among the discontinuities encountered were: (i) automatic promotion in the ghetto school as opposed to promotion on an academic basis in college/university; (ii) failure attributed to lack of ability and intelligence in the ghetto school as opposed to blame of failure on cultural deprivation, and (iii) school culture dominated by Black majority and culture in the ghetto school versus college/university dominated by White majority and culture. He continues that, while the ghetto school may not accomplish a great deal educationally, it does provide the Black student with a defined social situation where he/she is in the majority and where his/her language, attitudes and mores prevail. What usually happens (in colleges and universities) is that Black students band together in self-defence and adopt certain group strategies that were seldom needed in the ghetto school. These continuities and discontinuities encountered by Black students outlined by Elkind are extremely relevant to the South African context where the major problems of school-university transition exist because of a fundamental discontinuity between the state-run Black school system – particularly that of the Department of Education and Training (DET) – and traditional South African university education (Scott, 1990). Burns (1986) notes that a feature of Black schooling is the emphasis on rote learning which is in contrast to the deep level learning required at a tertiary level institution.

The consequences of this discontinuity between Black schools and the traditionally White university are graphically illustrated in the UCT Readmissions Review Committee report for the period 5/01/98–13/02/98 (Van der Merwe, 1998, quoted by Gelman, 1999) which states that 31 ex 38 (or 81,6 per cent) students who appealed to this committee completed their secondary education in schools which were administered by

either the former Department of Education and Training (DET), House of Representatives or House of Delegates which, under the apartheid regime, catered to Black (African), Coloured and Indian students, respectively. Furthermore, the Readmissions Review Committee Assistance Officer who counselled and assisted students appealing against the decisions of the Readmissions Review Committee stated in her report for the period 13/01/97–14/03/97 that the students to whom she attended were mainly from educationally disadvantaged backgrounds (Goliath, 1997, quoted by Gelman, 1999).

Various authors (e.g. De Winter Hebron, 1991; Jenkins, 1989; Machet, 1991; Stikes, 1986; Willie and McCord, 1972) assert that part of the reasons why minority group students in America and Black students in South Africa fail is because of the discontinuity between college/university education and the student's home/community life – "cultural mismatches" which are said to occur between Black students' home culture and the culture within which tertiary education is based.

This further discontinuity between the Black student's background and the traditionally White university is documented in research conducted by the UCT Equal Opportunity Research Project (EORP) into non-classroom related factors affecting academic performance at the University (Hall, Rex and Sutherland, 1995, quoted by Gelman, 1999) which indicates that, overall, Black students do tend to struggle academically relative to White students. The researchers attribute this pattern to a variety of factors including less educated parents and speaking English as a second or third language.

(iv) Academic performance

According to Malefo (1995), some of the attitudinal and behavioural characteristics assessed as determining academic achievement (which could be associated with academic stress) of Black students in predominantly White colleges/universities are: (i) study habits; (ii) academic integration; (iii) interfering problems such as emotional difficulties and interpersonal relationships (Nettles, 1988); (iv) social integration (Leon, 1987); (v) satisfaction with the college/university; (vi) feelings of racial discrimination (Fleming, 1984; Nettles, 1988); (vii) student accommodation; (viii) self beliefs, and (ix) levels of preparation (Kleeman, 1994; McLaren, 1989).

Heaven, Stones and Rajab (1984) found evidence of higher levels of achievement motivation amongst Blacks than Whites in South Africa and observed that this could be indicative of the general finding of high motivation amongst the impoverished or a reflection of selective pressures on Black students. Howcroft (1986) notes that by comparing himself/herself to other Blacks, the Black student who has obtained university status, and has therefore joined the ranks of an elite group within his/her community, could experience an enhanced level of academic self-esteem. Rugg (1982) and Suen (1983), however, note that at predominantly White institutions, Black students have a higher rate of attrition than do White students. These students perceived social isolation as a key factor (Jones, Harris and Hauck, 1975)

(v) The Academic Support/Development Programme

> *Education has been a highly charged political issue for many decades in South Africa. Critical analysis of the growth of the South African education system indicates that education has always been part of broader patterns of social inequality along class, colour and gender lines ... because access to educational opportunities by different sectors of the S.A. population became, par excellence, a function of the position in the social and racial hierarchy of each population group.*
>
> (Malefo, 1995: p. 1)

This statement provides a suitably acerbic commentary on the parlous state of the education system which catered to the needs of historically disadvantaged students under the previous regime. Therefore these students face not only the daunting task of attending an institution whose predominantly Eurocentric culture is profoundly at odds with their own but they are also forced to overcome the consequence of being severely underprepared for the often exacting demands of a tertiary education. Consequently the Academic Support/Development Programme (ASP/ADP) was a direct response to the increase in the number of Black students at historically White universities and the high failure rate amongst these students. Hunter (1989) notes that the immediate aim of the ASP is to maximise academic performance in students disadvantaged by the inadequacy of previous educational opportunities. The concern is not only that these students pass their courses, but that they become learners who are critical, independent, exploratory, creative and effective in processing, organising and communicating facts and ideas. Without these necessary skills, the educationally under-prepared Black student would always be prone to academic problems and resultant stress which could predispose him/her to mental illness.

Likewise, the UCT-ADP was established not simply in an effort to reduce the overall first-year failure rate or as a way of dealing with "weak" students, but rather as a central element of the University's response to the inequalities in South Africa's education system. It follows that the UCT-ADP has a particular concern for the educational needs of students who matriculated under the education departments responsible for "Black" (African), "Coloured" and "Indian" education. In attempting to assist these students to realise their academic potential, the UCT-ADP has in recent years focused much of its work on the design and implementation, in association with the relevant faculties and departments, of first-year level courses and curricula that are geared to the needs of educationally disadvantaged students and are offered as alternatives to traditional first-year courses. This reflects the belief that rigid and monolithic curricular structures cannot be expected to serve the needs of the increasingly diverse student intake, particularly at entry level. These alternative curricula (including "bridging" programmes) are generally linked to special admissions programmes which offer conditional admission to talented but disadvantaged students who do not meet standard entry criteria. They are thus regarded as a key means of raising Black student participation and success rates at UCT.

The form of intervention that is necessary is clearly dependent on factors such as the level of student under-preparedness and the nature and demands of the regular courses which students are taking or for which they are being prepared. There is thus a close relationship between the nature of the educational intervention that is required and the willingness and ability of academic departments to provide a learning environment that can accommodate the needs of a heterogeneous student intake. In addition, it is recognised that non-academic factors often result in students experiencing increased difficulty with their studies, and the University is continually seeking methods of improving its social support services in such areas as financial assistance, accommodation and student counselling.

Many have claimed that ASPs are successful (Driskell and Kelly, 1980; Foster, 1990; Greenberg and Lieberman, 1981; Mullin and Summers, 1983; Ornstein, 1982; Perfect and Robinson, 1983). Hampton (1979) professes that the best results are achieved when course work and tutoring are combined with counselling. He therefore suggests that ASP should provide a holistic approach. Hofmeyer and Spence (1988) contend that there is a growing awareness of this need for holistic approaches to deal with under-prepared students so that both academic and non-academic issues can be addressed. Indeed, Elkind (1971) and Hedegard and Brown (1969) note that changes American colleges and universities made in their academic offerings, counselling programmes and supportive services to meet the needs of the larger numbers of minority students in attendance were motivated by the general assumption that minority students' expectations, academic preparation, socio-psychological outlook and need for counselling differed enough from that of the average White student to warrant special measures to ensure their academic success.

3.1.3.2 Student needs assessment

> *Most college (university) counseling centers provide services for students without ever attempting to assess the needs of the students targeted for these services.*
>
> (Gallagher, 1992: p. 281)

This statement by Gallagher is patently an indictment of the college/university mental health care system and raises a clear shortcoming in the delivery of counselling services to students. As a solution to this problem, needs assessment functions as one of the most useful and efficient means available to help identify college/university student concerns. Bertocci et al. (1992) note that the planning and developing of campus mental health services rarely are guided by a formal assessment of the mental health concerns of the overall student body.

(a) Goals/function

Gallagher, Golin and Kelleher (1992) note that it is important to supplement information from college/university students who have sought counselling with data describing the perceived needs of the

college/university population as a whole. This data can be helpful to service providers on college/university campuses in setting priorities and planning programmes (Gallagher and Scheuring, 1979, and Weissberg et al., 1982). Indeed, accurate identification of concerns is becoming increasingly important in light of the growing diversity of students on campus, their changing personal and career needs, and the heightened accountability demands that confront student services programmes. Without student needs assessments, decisions made on behalf of students may not accurately relate to students' own needs. This seems particularly important in recent years as colleges and universities have become increasingly concerned with retention rates among students (Gallagher, 1992). Needs data , especially when broken down into student subgroups, can help student personnel workers make decisions about where to focus their clinical resources and their outreach efforts (Gallagher, Golin and Kelleher, 1992) to optimise student adjustment to college/university. Indeed, Nicholas (1995) states that needs assessment is a useful tool in developing large and small group programmes focusing on the expressed needs of students who may need assistance but are reluctant to seek individual counselling.

Although questions have been raised about the extent to which student needs surveys predict the actual use of college/university mental health services (e.g. Barrow et al., 1989, and Carney, Savitz and Weiskott, 1979), Gallagher, Golin and Kelleher (1992) observe that self-reported needs do seem to reflect real concerns of students and are, therefore, of interest in their own right. Friedlander (1978) has shown that the question of expressed need and actual participation in need-related services are not as strongly related as expected insofar as even though students may rate a service as being a valuable form of assistance for specific needs, they still may not use that service themselves. Whether students follow through to request services may depend on a number of pragmatic variables (time constraints, availability of services) and personality factors (anxiety level, assertiveness, "readiness" for help) (Gallagher, Golin and Kelleher, 1992).

Gallagher, Golin and Kelleher (1992) recommend that as counselling centres become more aggressive in fighting for a fair share of dwindling institutional resources, the sharing of locally collected data from student needs surveys can help to build needed administrative and faculty support. Targeting faculty members involved in institutional governance and educating these individuals on the "academic" importance of attending to the personal, career and learning skills needs of students might also help to build the political alliances needed to keep counselling programmes and other student service units from becoming easy targets for budget reductions.

(b) Developed (first world) countries

Three of the studies conducted at tertiary educational institutions situated within a developed (first world) country (USA) are reported here – one of them at the Ohio State University (Carney, Savitz and Weiskott, 1979), another at 11 different universities in different geographical locations (Mathiasen, 1984) and the last at the University of Pittsburgh (Gallagher, 1992). The subjects of these studies would probably be exposed

to very few of the stressors and cultural factors affecting many students registered at UCT during the study period. These results are, however, important as this thesis does not address concerns and problem areas affecting the student community – albeit the subjects of these studies derive from a highly developed country with a somewhat different set of challenges affecting their students. This information is important to the understanding of problems associated with student adjustment to college/university and the possible pathogenesis of mental disorders requiring evaluation and/or therapeutic intervention. (These comments are equally relevant to the following subdivisions outlining student needs assessments conducted in Southern Africa and metropolitan Cape Town, respectively.)

In the studies mentioned above, conducted at tertiary educational institutions in developed (first world) countries, Carney, Savitz and Weiskott (1979), conducting a telephonic needs assessment survey amongst 801 Ohio State University students, found that student concerns were largely centred around four areas: (i) career planning; (ii) finances; (iii) academic effectiveness, and (iv) negotiating the system. In addition, Mathiason (1984), conducting needs assessment surveys at 11 different universities in different geographical locations, identified a similar cluster of student needs together with personal and emotional problems such as adjustment to college/university life, depression, anxiety, stress, relationships, crisis interventions.

Gallagher (1992), conducting a postal needs assessment survey amongst 607 randomly selected University of Pittsburgh student respondents (1 800 questionnaires sent yielding a response rate of 33,7 per cent), reports that large numbers of students experience a significant amount of stress as they pursue their academic goals – slightly more than half of the respondents expressed a need for assistance in overcoming: (i) procrastination; (ii) public speaking anxiety problems and (iii) in improving their study skills and between 25 per cent and 50 per cent expressed concern about: (i) career uncertainty; (ii) self-confidence problems; (iii) lack of motivation; (iv) fear of failure; (v) anxiety and nervousness; (vi) problems with faculty; (vii) depression, and (viii) lack of purpose in life. The author notes that this stress is greater for some groups of students than for others – Black students in particular seem to find the college/university experience stressful and worrisome while female students, undergraduate students and nursing students also tend to have greater concerns than do their peers. Gallagher, Golin and Kelleher (1992) state that these concerns, quite probably, are partly the result of personal problems, skill deficiencies and normal developmental issues that students bring with them to the university and partly the result of institutional pressures encountered on campus. Whatever their origin, concerns such as these have long been recognised as having a significant impact on students' ability to benefit from the higher education experience. Gallagher (1992) states that these findings provided an excellent opportunity to educate the campus community about the current emotional, social, career and learning skills needs of students.

It is noteworthy that Gallagher's study coincides with the study period of this thesis (1991 to 1993). The fact that African-American (Black) students, in particular, are predisposed to stress and, thereby, adjustment disorders to college/university is an extremely relevant finding as this group politically and

socio-economically corresponds most closely to local historically disadvantaged students. Therefore, predisposition to student mental illness appears to cross certain cultural boundaries while remaining constant with respect to other racial and social divides.

(c) Southern African countries (excluding metropolitan Cape Town)

Three of the studies conducted at tertiary educational institutions situated within Southern Africa are reported here – one of them at the Rand Afrikaans University (Henderson, 1987), another at the University of the Witwatersrand (Agar, 1990) and the last at the University of Botswana (Navin, 1992). The subjects of these studies, unlike those in the USA, would be exposed to many of the stressors and cultural factors affecting students registered at UCT during the study period.

In the studies mentioned above, conducted at tertiary educational institutions situated in Southern African countries (excluding metropolitan Cape Town), Henderson (1987) reports that in Black students attending the Rand Afrikaans University the most frequently cited difficulties were related to socio-political factors, including: (i) accommodation; (ii) transport and financial difficulties; (iii) lack of intergroup communication, and (iv) discriminatory practices. White students attending the Rand Afrikaans University, on the other hand, most frequently cited study and career difficulties followed by personal and social problems. The author hypothesises that socio-political factors were not mentioned by the White students because they remained relatively unaffected by them.

Agar (1990), conducting a questionnaire-based needs assessment survey of Academic Support Programme (ASP) students (who represent predominantly disadvantaged Black students) attending the University of the Witwatersrand, reports that students cited the following as problem areas: (i) lack of financial support; (ii) conflicting demands of courses; (iii) conflicting demands of academic and non-academic commitments; (iv) lack of confidence; (v) poor time management; (vi) the gap between school and university – particularly in terms of skills required for academic learning; (vii) anxiety and socio-economic problems; (viii) poor study methods; (ix) absence of feedback, and (x) lack of supervision. In addition, Agar and Murray (undated) note that disadvantaged students (Black students – particularly those coming from the erstwhile Department of Education (DET) schooling background) would be subject to: (i) unpreparedness for the more problem-solving orientation of colleges/universities; (ii) substantial gaps in factual knowledge; (iii) an unrealistic perception of their own abilities; (iv) a lack of understanding of how much effort is required to master a learning task; (v) a lack of respect for learning; (vi) a limited command of academic English and limited experience of interacting with native speakers of English; (vii) limited familiarity with the culture at present prevailing in the college/university attended; (viii) little knowledge on which to base informed choices about their degrees and future careers, and (ix) problems with finance and accommodation.

In South Africa the sociological trend of historically disadvantaged Black students (who are representative of the majority population group in the country) attending predominantly White colleges/universities in

increasing numbers has been artificially delayed due to apartheid inspired laws which severely restricted their access to these tertiary academic institutions. Consequently this trend has only become evident at UCT since circa the mid-1980s (viz. fully two decades after America) with a rapid acceleration following the political and social transformation affecting this country since 1990. Even within the American context, Mackey (1972) and Leavitt, Carey and Swartz (1971) note that newly arrived minority group (mainly Black) students on predominantly White college/university campuses are at high risk and have, thus, become a target of appropriate concern for mental health and other professionals.

The Academic Development Programme (UCT-ADP) fulfils the same role as the University of the Witwatersrand ASP by aiming to assist these high risk students to overcome the above educational deficiencies due to the legacy of apartheid. However, this state of underpreparedness only serves to place increased pressure on the historically disadvantaged Black student to meet the exacting academic demands of the University. This stress, in turn, can often manifest as either a uncomplicated adjustment disorder or other overt forms of mental illness which would require evaluation and/or therapeutic intervention at the UCT-SHS-MHS.

Navin (1992), conducting a questionnaire-based needs assessment survey amongst 507 University of Botswana students (and staff members) – in line with "Revised Guidelines for University and College Counseling Services" of the International Association of Counseling Services (Garni et al., 1981) – reports that the students indicated their preference for seminars in the following topics relating to proactive services and developmental needs: (i) career choice (94 per cent); (ii) study skills (93 per cent); (iii) stress management (90 per cent); (iv) AIDS (90 per cent); (v) orientation to the University (90 per cent); (vi) drug/alcohol use/abuse (87 per cent); (vii) family planning (86 per cent); (viii) male/female relationships (69 per cent), and (ix) orientation to Botswana (63 per cent). When these students were asked to indicate the extent to which 15 topics were of concern to them, the following response was obtained: (i) academic stress (93 per cent); (ii) learning problems (88 per cent); (iii) career choice (86 per cent); (iv) psychological problems (85 per cent); (v) drug/alcohol use/abuse (84 per cent); (vi) general frustrations (83 per cent); (vii) depression (83 per cent); (viii) student and staff relationships (81 per cent); (ix) lack of recreational programming (80 per cent); (x) AIDS (79 per cent); (xi) student/other University employee relationships (73 per cent); (xii) sexual issues (66 per cent); (xiii) heart palpitations (62 per cent); (xiv) problems with spouse (60 per cent), and (xv) using traditional medicine (30 per cent). The author states that most of these concerns raised by the students indicate the need for trained counsellors to be available to assist them in resolving these issues.

Navin's study, like that of Gallagher (1992), runs concurrent with the study period of this thesis (1991 to 1993). As the vast majority of students attending the University of Botswana are Southern African citizens, it would appear reasonable to assume that many of their concerns would also affect local African students attending UCT. Even allowing for various cultural and ethnic differences between students in South Africa and Botswana, the socio-economic conditions affecting the majority of Botswanan students should closely

resemble those of local historically disadvantaged Black students. Concerns about the use of traditional medicine is a potentially important culturally-based issue expressed by a sizeable minority of students which might have much relevance in the student's decision regarding which type of treatment (traditional medical model versus conventional Western medical model) to seek. In addition, the students' list of preferred seminars might encourage University authorities to institute appropriate preventive and educative programmes directed at UCT students.

(d) Metropolitan Cape Town

Three separate studies have been conducted at tertiary educational institutions situated within metropolitan Cape Town – one of them at the University of Cape Town itself (Flisher, 1978) and the remaining two at the University of the Western Cape (UWC) which is less than 30 kilometres from UCT (Van Schoor and Whittaker, 1988 and Nicholas, 1997). The subjects of these studies (non-historically disadvantaged White students and, especially, historically disadvantaged Black students, respectively) would, like their Southern African peers, be exposed to many of the stressors and cultural factors affecting students registered at UCT during the study period.

In the studies mentioned above, conducted at tertiary educational institutions situated in metropolitan Cape Town, Flisher (1978), conducting a postal needs assessment survey amongst a stratified sample of 971 University of Cape Town student respondents (2 141 questionnaires sent yielding a response rate of 45,4 per cent), reports that students perceived themselves as being subjected to superficial to severe problems in the following areas: (i) ability to concentrate (69,6 per cent); (ii) depression (61,0 per cent); (iii) self-confidence (54,0 per cent); (iv) anxiety (52,9 per cent); (v) study techniques (52,5 per cent); (vi) meaning of life, self development or personal fulfilment (49,0 per cent); (vii) unsatisfactory academic achievement (47,5 per cent); (viii) vocational or career choice (40,7 per cent); (ix) relationships with boyfriends or girlfriends (40,5 per cent); (x) apathy or detachment (35,5 per cent); (xi) relationships with close family (33,1 per cent); (xii) loneliness (32,5 per cent); (xiii) relationships with friends or contemporaries (31,3 per cent); (xiv) sleep (27,4 per cent); (xv) choice of courses (25,6 per cent); (xvi) sex (25,4 per cent); (xvii) relationships with UCT staff (21,7 per cent); (xviii) religion (17,5 per cent); (xix) mood or dispositional states as a result of physical disability or medical illness (17,3 per cent), and (xx) drugs/alcohol (5,3 per cent). The author notes that certain problems are not applicable to some students (e.g. problems with choice of courses do not apply for people whose curriculum is a fixed one). Also observed is the fact that the overwhelming majority of students would probably not seek help for their stated difficulties.

It is important to note that this study was conducted 20 years ago. As previously mentioned in Chapter 1, the racial composition of the University in the 1970's was very different to that of the study period (1991 to 1993) as very few Black (African – especially, Coloured and Indian) students were permitted to study at UCT. Therefore, these results would largely reflect the concerns of non-historically disadvantaged White

students – unlike the UWC results that follow. However, several of these student concerns are universal and independent of culture and race although these results do suggest that non-historically disadvantaged students attending UCT appear to be slightly less predisposed to low self-confidence and low personal fulfilment than their historically disadvantaged peers attending UWC. This finding is not surprising when the socio-economic and educational backgrounds of these two diverse groups of students are compared. There are no results available for a more culturally and racially diverse student body as this study is the only one of this nature conducted at UCT.

Van Schoor and Whittaker (1988), conducting a questionnaire-based needs assessment survey administered to 638 undergraduate Psychology, Economics and Mathematics students (9,1 per cent of the total student population) at the University of the Western Cape, report that their data supports the findings of previous studies (e.g. Carney and Savitz, 1980, and Cloete and Le Roux, 1979) that students are in greatest need of help in the vocational-academic areas, with personal-social concerns reported with lesser frequency. In addition this data is further supported by students who actually attend the Centre for Student Counselling – 60,47 per cent of attendees reported problems in the vocational and academic areas while 39,53 per cent reported problems in the personal-social domain (Year Report, 1984). The authors note that student counsellors should be especially aware of the fact that vocational-academic problems are often seen as "safe" presenting problems by clientele who are generally not "counselling sophisticated" rather than the underlying personal-social problem.

Nicholas (1997), conducting a questionnaire-based needs assessment survey administered to an undisclosed group of 1 817 first year students at the University of the Western Cape, reports that students perceived themselves to be in moderate and high need for help with the following problems: (i) public speaking anxiety (66,6 per cent); (ii) increasing self-confidence (64,4 per cent); (iii) increasing motivation (62,9 per cent); (iv) controlling anxiety and nervousness (59,4 per cent); (v) fear of failure (59,1 per cent); (vi) concern about relationships with academic staff (58,2 per cent); (vii) adjustment to campus (53,2 per cent); (viii) finding greater purpose in life (52,8 per cent); (ix) becoming more assertive (52,7 per cent); (x) overcoming procrastination (49,4 per cent); (xi) eliminating self-defeating behaviours (48,2 per cent); (xii) overcoming shyness (45,7 per cent); (xiii) coping with depression (42,0 per cent); (xiv) meeting people to date (41,3 per cent); (xv) discomfort in social situations (37,8 per cent); (xvi) problems with controlling temper (36,7 per cent); (xvii) roles and expectations for men and women (36,6 per cent); (xviii) controlling weight (34,3 per cent); (xix) anxiety about Aids (33,0 per cent); (xx) conflicts over values and morals (32,9 per cent); (xxi) adjusting to culture norms (31,7 per cent); (xxii) recurrent headaches or stomach-aches (30,8 per cent; (xxiii) coping with loneliness (30,2 per cent); (xxiv) coping with a broken relationship (27,5 per cent); (xxv) problems with parents (26,4 per cent); (xxvi) coping with prejudice (25,9 per cent); (xxvii) concerns about sexual functioning (22,4 per cent); (xxviii) insomnia (21,9 per cent); (xxix) suicidal feelings (17,0 per cent); (xxx) concerns about sexual identity (14,7 per cent); (xxxi) controlling drinking (13,0 per cent), and (xxxii) peer pressure to drink to excess (11,4 per cent). The author notes that these findings suggest that entering first year university students may: (i) have poor study skills; (ii) be enrolled

for programmes in which they may be unsuited, and (iii) may not be used to seeking or using counselling to assist them with their problems. Consequently, they may be at greater risk of failure.

In an earlier, but compatible, needs assessment study conducted at the same tertiary educational institution, Naidoo (1995) notes that the degree and range of personal concerns identified by the respondents underscores the need for lifeskills programmes that would offer students the opportunity to develop their personality, interpersonal skills and deal with developmental issues germane to young adulthood. The large proportion of respondents indicating need for assistance with career concerns, according to the author, exposes the inadequacy of vocational guidance provision at high school. Similar indications for assistance with learning skills point to students' sense of feeling underprepared for the academic demands of tertiary education and would support the need for academic development programmes that would enhance these skills.

Nicholas' study, unlike that of Flisher (1978) but like those of Gallagher (1992) and Navin (1992), is contemporaneous with the study period of this thesis (1991 to 1993). As UWC is a tertiary institution catering for historically disadvantaged students, it would appear reasonable to assume that many of these concerns should also affect this group of students attending UCT. It is not surprising that the majority of UWC students are affected by low self-confidence and low motivation together with adjustment problems to campus when their socio-economic and educational background is taken into account. The vast majority of historically disadvantaged students at UWC and UCT are probably subject to at least one (or more) of these problems. Many of these students do not receive the assistance they perceive themselves in need of requiring due to a lack of professional resources at these tertiary educational institutions. This situation could easily lead to these unresolved problems deteriorating into overt mental disorders that require evaluation and/or therapeutic intervention at a mental health service such as the UCT-SHS-MHS.

The notable difference between these two tertiary educational facilities serving metropolitan Cape Town is that UWC was historically planned to specifically (and exclusively) cater for Coloured – and to a lesser degree, African – students whereas UCT, on the other hand, has, until recently, been viewed as a traditionally White university. Therefore, by design due to the implementation of social engineering, the historically disadvantaged Black student attending UWC reflects the composition of the student population. On the other hand, his/her peer attending UCT, who certainly does not mirror the composition of the total student community is, by definition, subject to additional cultural adjustments which could easily precipitate further mental disorders. Consequently, it could be argued that the historically disadvantaged Black student registered at UCT will be subject to a more stressful educational process than his/her fellow student studying at UWC.

3.1.3.3 Manifestations of successful adjustment to college/university

The complex new social, intellectual and technical challenges in college/university may be met through diverse coping strategies which, in generic terms, involve not only the management of self-esteem and anxiety in the face of new standards of intellectual performance and academic competition with one's peers but also management of environmental resources. These tasks are critical in the sense that the adolescent confronts them while he/she is resolving the social ambiguities of living between two worlds – no longer a "school kid" and not yet the finished "college man/woman" (Coelho, Hamburg and Murphey, 1963).

(a) Academic selectivity

Snyder and Kahne (1969) state that students must learn to selectively neglect certain activities and to assign strict priorities to the subjects they study if they are to maximise their academic standing. The institution as much as the student sets the odds on the strategies which help him/her to survive in the immediate present and the coping patterns that will lead to academic success. Those strategies which help him/her to survive in the immediate present do not automatically serve the student well in mastering his/her field or in developing his/her intellect. Consequently, Snyder (1967) and Snyder and Kahne (1969) note that the educational environment extended the capacity of some students to adapt to a range of stimuli while it appeared to lock others into reliance upon one narrow skill. In the process of achieving mastery over a given educational task, students' cognitive and adaptive styles at times become so fixed that their ability to cope with altered circumstances appeared to be limited. Severe restriction in adaptive potential may then be the price that is paid for a parochial and temporary success in education. This narrow mode of adaptation – the blinders that the student has put on – may well protect him/her from uncertainty, alienation or a sense of helplessness, and thus, from the signs and symptoms of more active conflict which is more easily recognised as sickness.

(b) Social integration

> *If the college experience positively influences students' social integration, then it seems reasonable to expect that a student who is more integrated, or involved, in the social life of an institution will grow in a number of ways.*
>
> (Griffin, 1991: p. 239)

This statement by Griffin confirms that social integration is the essential precursor to successful adaptation and adjustment to the complex social, intellectual and technical demands of college/university. This author notes that social integration has been defined by certain traits identified in the literature (e.g. Beal and Noel, 1980; Pascarella et al., 1983, and Tinto, 1975) as: (i) the measurement of the extent and quality of a student's relationship with peers at the institution; (ii) measurement of the quality and impact of a student's informal, non-classroom interactions with faculty; (iii) the frequency of freshman (first)-year, non-class

contacts with faculty; (iv) the opportunity to socialise informally, and (v) the ability to discuss a campus issue or problem.

Social integration is also defined as the degree to which a student perceives that he/she is making a positive adjustment to the social life at the university. This positive adjustment may be obtained when the student feels comfortable with his/her interpersonal and communication skills which will enhance his/her ability to communicate with faculty, staff and fellow students (Beal and Noel, 1980; Spady, 1970). Essentially, according to Griffin (1991), social integration is a process by which students become acclimated to the university environment and perceive themselves as members of the university community.

3.1.3.4 Manifestations of unsuccessful adjustment to college/university

There are several manifestations of unsuccessful student adjustment to college/university which include, inter alia, a sense of learned helplessness, dissatisfaction with college/university, the development of racial tension and alienation, dropping out of college/university and the development of mental illness (see below). There is a complex but by no means clear-cut or uniform interrelationship between these individual manifestations although there is much commonality between them.

(a) Learned helplessness

Bandura (1977) distinguishes between efficacy expectations – the belief that one can successfully perform the behaviour required to produce the outcome which is a function of the belief in one's own competence (i.e. a good matriculation result will lead to academic success at university) and outcome expectations – an estimate that a given behaviour will lead to a certain outcome which is a function of the belief in one's environment (i.e. hard work will lead to academic success at university). Feelings of futility may result from low self-efficacy or the perception of a social structure as being unresponsive to one's action. "Learned helplessness" (Seligman, 1975) refers to a chronic sense of inefficacy resulting from learning that one's actions have no effect on one's environment and is associated with minority status (Moritsugu and Sue, 1983). Abrahamson et al. (1978) argued that depression stemming from learned helplessness is likely to occur when the individual attributes his/her inefficacy to personal failure rather than to universal conditions. Wilson and Linville (1982) hypothesised that if students were able to attribute their difficulties to a temporary cause, they would be more likely to persevere than if they attributed difficulties to a more permanent and enduring factor, such as lack of ability.

(b) Dissatisfaction with college/university

Davy (1957) notes that some undergraduates prove unable to profit fully from the opportunities a university offers and so fail significantly to develop their academic, cultural and social potentialities – in other words, to find themselves. The author then describes the person who has found themself as being recognisable as

someone who is beginning to see more clearly the nature and extent of their gifts and skills and of their weaknesses and inexperience, and recognises the opportunities, the responsibilities, and the handicaps which arise from them. They are developing a growing confidence in their judgement and with it the skill and the courage to express an opinion and to defend it. In short they can face the demands and the opportunities of their life unhandicapped by fear. They are laying a sure foundation on which to build and are gaining the insight necessary for realistic planning. By contrast, to the undergraduate who has not found themself the world is a difficult place. They are forever misinterpreting the causes of their difficulties, blaming themself, their fellow people, and their material circumstances, for their frustrations. Their discontent is not the healthy dissatisfaction with an imperfect world which spurs on to effective action, it is the unhealthy brooding over a disappointing, denying world which breeds an aggressive resentment or a dispirited apathy and provides a treacherous foundation upon which, by unrealistic planning, they are likely to build unwisely. Disappointment with the results serves only to confirm the fears and the resentments.

Segal, Walsh and Weiss (1966) note that developing specialised talents and interests, especially if they are not physical and if the development occurs at the cost of gregariousness and popularity, often runs counter to young people's conceptions of the ideal male (especially) adolescent role. This, the authors note, may be the reason that on many campuses the obsessively inclined intellectual student is not likely to find his/her campus experience rewarding. In addition, characteristics emphasised by the selection and admission process, important for enabling particular individuals to become students in official terms, are not necessarily the qualities that will bring them prestige, or even acceptance, in terms of values that are more important to the predominant student culture. These intellectual students may be regarded by their peers as having departed from the prevailing standards of student culture, as failing to live up to the idealised and valued role of the gregarious but assertive young male (female). As a result, instead of winning peer support, they are more likely to have to bear the additional burden of being ignored or denigrated.

(c) Racial tension and alienation

Racial conflict on campus is an indicator of a more general problem of unresolved racial issues in society at large (Hurtado, 1992). Even on relatively calm campuses there are differences in students' racial attitudes and considerable social distance among students of different racial or ethnic backgrounds (Loo and Rolison, 1986; McClelland and Auster, 1990). In a society such as South Africa, where racist laws have, until recently, enforced separate educational and residential facilities and ideologically fostered animosity amongst the various race/population groups, Selikow (1994) observes that it is not surprising that Black students find it difficult to communicate with White students.

Alienation is defined by Loo and Rolison (1986) as the outcome of one's holding values highly different from those of the social collectivity and consequently having insufficient personal interaction with other members of the collectivity. Studies that have assessed the impact of socio-cultural alienation on minority

students at White colleges/universities have found that it has a negative impact on academic achievement (Loo and Rolison, 1986; Nettles, Thoeny and Gosman, 1986; Suen, 1983; Tracey and Sedlacek, 1987; Willie, 1981). This is because success in college/university is influenced by a sense of belonging and integration (Boyer, 1984; Kraft, 1991; Nettles, Thoeny and Gosman, 1986). Smith and Allen (1984) argue that of all the problems faced by Black students on White-dominated campuses, those arising from isolation and alienation seem to be the most serious. Selikow (1994) notes that high levels of alienation may impact negatively on academic achievement as energy is required to adapt to a different class and cultural situation and this detracts from academic endeavours.

Kraft (1991) and Vilikazi and Tema (1985) argue that to counteract the hostility and racism of White students, closeness was often fostered among Black students who formed a minority on White campuses. Similarly, Loo and Rolison (1986) suggest that minorities may feel alienated from the larger campus community but may be well integrated into their own ethnic subculture.

(d) Withdrawal from college/university

Allen and Janowitz (1964) note that there are students whose ego development or level of maturity is limited insofar as they are unable to: (i) plan ahead; (ii) cope with real work; (iii) sustain motivation; (iv) ignore distracting pleasures, and (v) formulate and follow through an adult-orientated pattern of living. Even though they feel discomfort, suffer low morale and recognise their inability to meet college/university demands, the authors observe that these students are usually better advised to withdraw from college/university in the hope that rehabilitative life experiences away from there will enable them to grow up. Helping such students to assess realistically their present inability to function in the college/university and to find more appropriate, satisfying and constructive academic or vocational opportunities is a frequently unrecognised but important role of the mental health service.

Pervin, Reik and Dalrymple (1966) define a college/university dropout (most of whom are voluntary) as any student who leaves college/university for any period of time, regardless of the reason (often due to mental disorders), and thus does not obtain his/her degree at the same time as the class with which he/she originally enrolled. The dropout is viewed by society to have: (i) ruined his/her own future; (ii) taken advantage of his/her institution's resources, and (iii) subtracted from the national interest. In a similar vein, Kessler et al. (1995) note that student failures are important for at least two reasons: (i) from a societal perspective, the ability of a nation to increase its standard of living and to provide the basis for widespread participation in civic affairs requires an educated citizenry, and (ii) from an individual perspective, success in the educational system is a critical determinant of many later-life opportunities and experiences, including occupational achievement (Featherman, 1980), financial security (Jencks et al., 1979) and lifestyle behaviours that influence health and well-being (Bowman and Anderson, 1963). Likewise, Behr and Behr (1965) note that the high rate of failure among first year university students is a matter of considerable concern to educational authorities in South Africa as failure is costly not only in terms of

money, energy and time to the student and the institution but it is also damaging in morale to the student and lecturer.

The relationship between psychological illness and withdrawal from college/university is confirmed by the finding by Miller (1970) that students of the City University of New York requested to leave for the following reasons: (i) emotional and personal problems in 28 per cent of cases; (ii) emergencies such as financial difficulties and deaths of parents in 22 per cent of cases, and (iii) pregnancy and the need to support children in 20 per cent of female students. (Some possible further degree of psychological disturbance would appear implicit in the latter reasons.) Furthermore, Craig (1974) reports that 33,3 per cent of students who withdrew from an anonymous art college in the Baltimore area indicated that their withdrawal was either totally or partially due to emotional difficulties – a figure the author feels may be considered as a minimum since many students may have been reluctant to acknowledge emotional problems as the basis for their withdrawal. Conversely, Nicholi (1967) reports that the usage/utilisation rate of students who visited a psychiatrist and were diagnosed as having a specific disorder before withdrawing from college/university (383 per 1 000 students) was approximately four times greater than among the general undergraduate population at Harvard University (range 80 to 100 per 1 000 students). However, these studies do indicate that psychiatric disorders are an important cause of the large number of students who terminate their college/university careers.

(e) Mental illness in students

This subdivision is divided into five subsidiary subdivisions. The first subsidiary subdivision provides a definition of mental illness in general. The second subsidiary subdivision outlines precipitating factors for mental illness and includes a system that identifies three broad types of crises that may be responsible for the development of these disorders. The third subsidiary subdivision overviews some of the consequences of mental illness affecting students attending college/university which include academic impairment which, especially in historically disadvantaged and educationally underprepared Black students, could easily lead to exclusion from the University on academic grounds as well as the formation of pathological support subsystems which may lead to the development of antisocial behaviour. The fourth subsidiary subdivision documents the incidence and, more commonly, the prevalence of mental illness amongst the student body of tertiary educational institutions in predominantly developed (first world) countries – although reference is made to a recent study conducted at the University of Cape Town by Gelman (1999). The fifth subsidiary subdivision, which expands upon the preceding material, describes the MMPI (Minnesota Multiphasic Personality Inventory)-specific profile of a large sample of first year students attending a developed (first world) college/university.

It must be noted that the contents of this subdivision is intended to relate to the material contained in section 3.1 in which it is housed. Therefore this brief treatise on mental illness in general has been

designed to function independently of the main and more specific clinical data subsequently detailed in section 3.3.

> *The assumption that students will actually behave in ways that are congruent with official academic standards and with normative statements about the liberating and maturing aspects of higher education, is about as short-sighted as the assumption that sick people will act in ways that are medically rational.*
>
> (Segal, 1966: p. 360)

This statement by Segal is patently an indictment of the myopic philosophy often espoused by college/university authorities (including academic staff) and raises a clear shortcoming in the general delivery of services to students. Clearly not all tertiary educational institutions are so short-sighted as Farnsworth and Thorndike (1956) report that in a poll of college presidents nearly half of the 116 college presidents were concerned with the problem of the best co-ordination of student mental health services and more than half felt that the major health problem in their universities concerned the emotional difficulties of their students. Furthermore, Cox and Muhangi (1975) note that in developing countries, where trained manpower is at such a high premium, a serious look at student mental health problems would appear mandatory as the cost to the society of a depressed student who repeats a year or commits suicide is too high to be ignored.

(i) Definition

Segal (1966) states that mental illness (emotional disturbance, psychopathology) is a term used to describe a disturbance of thought or affect serious enough to: (i) constitute more than a transitory handicap to an individual's potential competence to perceive and interpret his/her environment and his/her interpersonal relations correctly, or (ii) keep him/her from maintaining a sense of well-being commensurate with a realistic assessment of his/her physical and social prospects, or (iii) prevent him/her from carrying out goal-directed activity at a level of competence, or expressive activity at a level of appropriateness, which his/her society believes it has a right to expect of someone in his/her position.

(ii) Precipitating factors

> *Illness behaviour can be viewed from at least four perspectives namely, as a disposition of the person, as a result of an interaction between personal and environmental factors, as a response to the health care service system, and as a decision-making process. A major dimension of the individual's perception and interpretation of disease is the way they evaluate the cause of a problem and the extent to which the problem is attributed to external environmental factors, internal difficulties such as morale and existential issues.*
>
> (Hartshorne, Carstens, Louw, Barrie and Jordaan, 1995a: p. 138)

This statement by Hartshorne et al. (1995a) outlines the complexity involved in the pathogenesis of student mental illness. Likewise, Mechanic and Greenley (1976) note that the high rate of distress in student populations focuses attention on the obvious, but often neglected, fact that distressing symptomatology commonly occurs among competent persons in demanding environments and may, in part, reflect environmental demands, interpersonal pressures, and uncertainties characteristic of certain stages in the lifecycle and particular social roles.

A student may be vulnerable or resistant to psychiatric symptoms by virtue of his/her early environment and genetic make-up (see below). But, vulnerable or not, he/she may develop symptoms only if he/she is subjected to certain immediate environmental conditions. Some of the conditions which are said to be relevant to the students are: (i) the pressures of studies; (ii) other college/university activities; (iii) identity problems, and (iv) difficulties with relationships, both sexual and non-sexual (Jones, 1972). However, Segal (1966) notes that students who are better able to adjust to the total range of their environments (including leisure activities) apparently learn how to adapt their schedules to secure a variety of gratifications, while others who cannot do so seem to become more disturbed and more isolated, with a strong possibility that their disturbance and isolation are mutually reinforcing. Of interest is the observation by Wig, Nagpal and Khanna (1971) that the psychiatric problems affecting students differ considerably from those of a hospital psychiatric clinic – especially as the student community has a relatively higher capacity to communicate and higher intelligence than the general patient population.

Hoffman and Weiss (1986) proposed a comprehensive and practical system for conceptualising the pathogenesis of college/university students' mental health problems. The first component of this system consists of three broad types of crises, including situational and developmental crises, as well as crises reflecting psychopathology, which are outlined below:

- Situational crises are defined as emotional crises resulting from a recent traumatic or problematic event or situation affecting the emotional well-being of the student (e.g. (i) landlord or roommate problems; (ii) failing a course; (iii) ending a relationship; (iv) unwanted pregnancy; (v) loss of close relative; (vi) graduation; (vii) rape). Thus, any major distress resulting directly from the student's interaction with people or events in the immediate past or present constitutes a situational crisis.
- Developmental crises are defined as emotional crises resulting from difficulties in resolving the normal developmental tasks of late adolescence as delineated by Coons (1970). There are five such tasks: (i) the task of shifting one's relationships from child-parent interactions, where one is in a subordinate role, to adult-adult relationships, which are characterised by mutual trust and respect; (ii) the capacity for true intimacy and mutually satisfying relationships; (iii) solidifying sexual identity – this involves the development of a sense of security and comfort with being a man or woman, as well as with one's choice of sexual orientation or lifestyle; (iv) formulating a personal value system that allows the student to act autonomously, and at the same time to get along with others, and (v) the choice of a life's work, or at least choosing career goals that will help one structure his/her life and plan for the future. Major difficulties in one or more of these areas may result in emotional distress for students and

lead to serious impairment of their ability to function in college/university, as well as possibly increasing the risk for other, more severe, psychological symptoms.

- Crises reflecting psychopathology are defined as any emotional crises in which pre-existing psychopathology has been instrumental in precipitating the crisis – this definition being initially employed by Baldwin (1978). These crises are of a recurring nature where severe neuroses or depression, characterlogical (personality) disturbance, or psychotic tendencies play a significant role in creating or maintaining the emotional distress. Such crises often are difficult to differentiate from situational or developmental crises, particularly when knowledge of past psychiatric history is limited (e.g. when it is the student's first visit to the counselling centre).

(iii) Consequences

Kidd and Caldbeck-Meenan (1966) note that, although psychiatric disorders occur among all groups of the general population, it would be difficult to suggest a group of young people in whom the consequences are more serious than that of university students. So much is at stake during the short time spent at university that students cannot afford to be ill for any reason, least of all from psychiatric disorders where the ability to study, the first requirement of all students, is especially impaired. Much of the concern with which university authorities view the mental health of their students is due not only to the widely-assumed relationship between psychological illness and poor academic performance, but also to an increasing awareness of the central role played by emotional factors in the adjustment of the young adult to the new, competitive and often demanding world of higher education.

– Academic impairment

The relationship between psychological illness and academic performance is confirmed by the finding that 28 per cent of the Yale students studied by Rust (1960) and 37 per cent of the students of Southern Connecticut State College studied by Rust and Davie (1961) reported that their personal problems interfered with their studies.

– Pathological supportive sub-systems

The social development model (Catalano and Hawkins, 1996) proposes that socialisation is achieved through processes involving four constructs: (i) perceived opportunities for involvement in activities and interactions with others; (ii) the degree of involvement and interaction; (iii) the skills to participate in these involvements and interactions, and (iv) the reinforcement the individual perceives as forthcoming from performance in activities and interactions. The authors note that when these socialising processes are consistent, a social bond develops between the individual and the socialising unit. In the context of this thesis, the individual is the student and the socialising unit is the University. This social bond between the student and the University would not develop if the student, due to either personal preference or cultural differences and linguistic difficulties, were isolated from the mainstream social and academic activities of

the University. This isolation would effectively curtail his/her involvement and interaction with the majority of the student community and, thereby, possibly promote the development of various mental disorders. This, in turn, could lead to less desirable forms of socialisation with fellow students affected by similar psychological problems.

The relationship between psychological illness and the formation of pathological supportive sub-systems by students as an alternative coping mechanism to assist them to deal with the stress which confronted them individually is raised by Craig (1974). The formation of these sub-systems has also been noted by Boyce and Barnes (1966) and Whittington (1963). In such a situation, students join deviant sub-systems which serve a supportive function in times of stress but which, conversely, tend to isolate the student from the larger system and make him/her more vulnerable to crises should this sub-system fail. These sub-systems (or "nestings" as Boyce refers to them) tended to be primarily involving sexual practices and criminal activity. This finding could provide a suitable explanation for the reason why several UCT students from historically disadvantaged backgrounds were involved in highly publicised instances of theft in and around campus.

(iv) Incidence and prevalence

> *For many the university course is their first experience of adult life and it has disappointed them and defeated their efforts to adjust to it: confirming not correcting false attitudes, strengthening not dispelling prejudices, inflaming not soothing resentments, quenching earlier enthusiasms.*
>
> (Davy, 1957, p. 548)

This statement by Davy is patently an indictment of the college/university experience which, for many students, is the cause of adjustment reactions of varying severity which can often lead to frank mental illness. Of note is that students identified as mentally disturbed (usually by a self-administered instrument such as the MMPI) in advance of seeking psychological or psychiatric treatment have been consistently more likely than have relatively healthy ones to go to seek psychotherapy at some point in their college/university careers (Segal, Walsh and Weiss, 1966). Therefore, there is an indirect (at least) link between the incidence/prevalence of mental illness in the student community and the utilisation of the mental health service. From a methodological viewpoint, Kramer (1957) notes that the prevalence rate can be determined more easily than the incidence rate since it can be estimated by a single case-finding survey of a population group. This is particularly true for the chronic diseases (such as many of the mental health disorders), but this should not obscure the fact that the incidence rate is the fundamental epidemiological ratio.

– Incidence

Thompson, Bentz and Liptzin (1973) state that studies to determine incidence rates of mental illness on campus are necessary to: (i) discover changes in the adjustment or mental health of students; (ii) provide clues to various aspects of university life that may be conducive to the production of maladaptive responses or "illness" among students, and (iii) assess the effectiveness of any mental health programme interventions. Incidence studies along with prevalence studies can provide the necessary information for planning adequate services to meet the student's mental health needs.

However, due to the more exacting methodological requirements needed to determine incidence rates of student mental illness (Kramer, 1957), there is a comparative dearth of these type of studies in the literature compared to the more ubiquitous prevalence rates. Therefore (largely due to the lack of adequate studies) no findings relating to the incidence rate of mental illness on campus are recorded in this subheading.

– Prevalence

Reifler and Liptzin (1969) state that estimates of prevalence of psychiatric disorder by survey have routinely given higher figures than that obtained by facility usage. While one explanation for this is that the population contains an unknown number of psychologically disturbed individuals who would not otherwise come to the attention of treatment facilities, another and more crucial problem has to do with definition of psychological disturbance and defining a "case", current or potential. It is expected that the more intensive the investigation of a particular individual, the greater the probability of discovering some psychological aspect of his/her personality that is not optimal, internally consistent, or "healthy". Likewise, Baker (1964) observes that some workers include in their concept of (psychological) disturbance virtually any troublesome deviation from ordinary, everyday behaviour and see almost no limit to the human situations in which they feel they should involve themselves directly. Others define disturbance more narrowly in terms of serious incapacitation, or threatened incapacitation, in some psychological or psychosocial sphere, and may be more conservative in application of their services, viewing the stresses in the student's life as providing opportunity for individual growth when met with personal initiative and resources.

In summary, Baker (1964) states that figures used to establish prevalence rates vary because: (i) varying definitions of disturbance in terms of degree of severity necessary for professional attention to be indicated (Dohrenwend and Dohrenwend, 1969 and 1974, also highlight the role of cutting points established on scales of distress); (ii) the kind of population selected for study in terms of academic and social accomplishment and apparent health; (iii) whether diagnosis is made from clinical-type interview material or from psychological tests; (iv) the relative proneness or reluctance of workers to diagnose pathology; (v) how closely the student is studied; (vi) whether the measure employed is based on a shorter or longer segment of the college/university career, and (vii) possibly cultural differences in the student body.

The following is a local study of the prevalence rate of mental illness in students attending a university health service for predominantly medical complaints:

- Gelman (1999) at the University of Cape Town, administering the Self-Reporting Questionnaire (SRQ)–25 to all UCT-SHS attendees between 26 June and 11 July 1998 (823 respondents), reports that 29,2 per cent of the sample were affected by minor psychiatric morbidity (MPM) (SRQ ≥8). It must be noted that this finding, obtained from a comparatively small sample of UCT-SHS attendees, does not necessarily reflect the true prevalence of MPM within the student body. Gelman's sample is subject to the same limitations as this study when generalising or extrapolating results obtained from a single venue to the total student community. (Refer to section 6.1.2.2 for further details of such limitations with the interpretation of data.) In the current absence of a true community-based sample, this study – despite the above limitations – complements the UCT-SHS study as it offers a further indirect indicator of minor psychiatric morbidity within the total student community.

The following are studies of the prevalence rate of mental illness on campus conducted in a developed (first world) country (USA):

- Nagelberg and Shemberg (1980) at Bowling Green State University, Ohio, administering the Health Opinion Survey (HOS) to a sample 10 per cent of the undergraduate population, stratified by class and college (equivalent to faculty) (1 900 questionnaires sent of which 1 214 were returned, yielding a response rate of 63,9 per cent), report that 10,1 per cent of the sample were scored as psychologically impaired. There were significant gender differences in HOS scores insofar as 12,4 per cent of female students compared to 6.0 per cent of male students were psychologically impaired (no χ^2; no $\rho < 0,05$). There were also race/population group differences in HOS scores insofar as 17,9 per cent of non-White students compared to 9,8 per cent of White students were psychologically impaired – however, due to the underrepresentation of non-Whites on the student body, extreme caution is necessary in drawing any conclusions from these figures (no χ^2; no p-value).
- Pearlman (1966) at Brooklyn College, administering a questionnaire to all graduating senior students (2 632 questionnaires sent of which 1 900 were returned yielding a response rate of 72,2 per cent), reports that 55,2 per cent of the sample felt their personal problems interfered with their studies, 33 per cent thought of seeking professional help with 7,1 per cent using the campus services, 5 per cent using community services and 8,3 per cent using private services.
- Thompson, Bentz and Liptzin (1973) at the University of North Carolina at Chapel Hill, administering the Health Opinion Survey (HOS) to all freshman/fresher students entering the University in the 1969-70 academic year (2 121 respondents), report that 5,3 per cent of the sample were scored as psychologically impaired. In addition, 55,0 per cent of the sample were scored as subclinically psychologically impaired. There were highly significant gender differences in HOS scores with female students recording a mean value of 28,4 compared to 27,8 for male students ($t = 2,81$; $\rho < 0,01$). There were also significant race/population group differences in HOS scores with Black students recording a mean value of 29,0 compared to 27,9 for White students ($t = 2,01$; $\rho < 0,05$) – however, as Black students comprised less than 3 per cent of the sample, extreme caution is again necessary in drawing any conclusions from these figures.
- Weiss, Segal and Sokol (1965) at an anonymous liberal arts college, administering the Minnesota Multiphasic Personality Inventory (MMPI) to all freshman/fresher students entering the University during a 6 year period from 1958 to 1963 (4 389 respondents), report that 11,5 per cent of the 6 year sample were scored as significantly emotionally impaired. A sharp increase in the prevalence of emotional impairment was noted over the 6 year period with 6,9 per cent of students entering in 1958 compared to 16,2 per cent of students entering in 1963 being

affected. The authors note that emotionally impaired students were consistently more likely than emotionally unimpaired students to seek psychiatric assistance with 28,4 per cent of the most impaired and only 5,6 per cent of the least impaired consulting a college psychiatrist at least once.

By way of summary, Segal (1966) in a review article comparing findings from five studies of college/university populations [Rust (1960) at Yale; Smith, Hansell and English (1963) at Eastmet – a pseudonym for a small, church-affiliated, eastern urban men's college; Weiss, Segal and Sokol (1965) at Wellround – a pseudonym for an eastern men's liberal arts college (refer above); Phillips (1966) at Wellround; and Manis et al. (1963) at Midwestern College – this study was not examined in depth in the review article] notes that these different studies to assess the true prevalence of emotional disturbances affecting students employed different self-administered questionnaire forms or standardised tests as a case-finding method. The author summarises the findings of these five studies by stating that: (i) at least 7 or 8 per cent of college/university undergraduates are almost certainly fairly seriously emotionally disturbed; (ii) there are strong grounds for assuming that the total proportion is almost twice that high because the number of false positives picked up by the various screening instruments seems a good deal smaller than the number of false negatives which the instrument did not identify; (iii) perhaps another 20 per cent, although not seriously handicapped, are probably not able to make full use of their potential abilities in all the areas of life which are significant to them, and (iv) roughly one-third of the college/university students whose emotional status has been examined in true prevalence studies have an impaired capacity to adapt to the changing circumstances and complexities of adult demands and responsibilities. These results are fairly consistent with the prevalence rate studies of mental illness on campus outlined above – insofar as Thompson, Bentz and Liptzin (1973) report a value slightly below the baseline figure documented by Segal (1966) while Weiss, Segal and Sokol (1965) record a prevalence rate somewhat above the baseline figure (but within the suggested figure) quoted by Segal (1966). As the methodology employed by Pearlman (1966) did not employ standardised tests as a case finding method, it is not possible to compare his results to those of Segal (1966). Likewise, Wright-Short (1967) states that deliberations by international bodies interested in student health reveal a remarkably constant proportion from one country to another of undergraduate students encountering difficulties in their study – about 10 per cent of students require psychological counselling, 4 per cent suffer from psychoneuroses of moderate degree which will require skilled psychiatric help, and 1 per cent suffer from psychotic illnesses leading to serious mental breakdown some time during the course of study.

Farnsworth (1966) quoted by Marshall and Wolff (1969) summarises the scope of the student mental health problem affecting a hypothetical tertiary institution with a student enrolment of 10 000 by stating that 1 000 students will be affected by emotional conflicts of sufficient severity to warrant professional help; 300 to 400 students will be affected by feelings of depression severe enough to impair their (academic) efficiency; 100 to 200 students will be apathetic and unable to organise their (academic) efforts; 20 to 50 students will be so adversely affected by past family experiences that they will be unable to control their impulses; 5 to 20 students will attempt suicide, of which 1 to 3 of them will succeed and 15 to 25 students will become ill

enough to require treatment in a mental hospital. It is noteworthy that comparable figures outlining the scope of student mental illness affecting South(ern) African students are not currently available. There appears, therefore, to be a gap in knowledge concerning the incidence and prevalence of mental disorders in local students.

(v) MMPI (Minnesota Multiphasic Personality Inventory) Profile

This is an alternative approach to assessing student mental health by measuring not only the presence or absence of psychological impairment in the student community, but also documenting the nature thereof according to the 10 clinical scales of the MMPI which is a validated instrument capable of delivering results that can be replicated. By including this additional data, this study transcends the prevalence studies appearing above in subdivision e(iv).

Segal et al. (1966), employing the MMPI on a sample of 4 849 entering freshmen/freshers have developed a profile characterising students who were assessed as "moderately to severely impaired" (5 or more T-scores of 70 or over on any of the 10 clinical scales) and who would be more likely than others to be seen by a psychiatrist during their college/university careers. The clinical scale-specific profiles were as follows: (i) hypochondriasis scale – slightly more than average number of physical complaints; (ii) depression scale – moderately depressed: somewhat tense and restless; (iii) hysteria scale – immature, suggestible and demanding; (iv) psychopathic deviation scale – rebellious or nonconformist; (v) masculinity-femininity scale – high aesthetic interests; (vi) paranoia scale – sensitive to others' opinions; (vii) psychasthenia scale – aware of asocial attitudes and emotional impulses but unable to control them; (viii) schizophrenia scale – eccentric, reclusive, withdrawn: many internal conflicts; (ix) hypomania scale – agitated schizoid personality, and (x) social introversion scale – reversed in unfamiliar situations.

3.1.4 Concluding Comments

The above theoretical framework concerning adolescent psychological development and the challenges associated with adjustment to university life provides important background information concerning developmental factors affecting both the general student community and those students presenting at the UCT-SHS-MHS for evaluation and/or therapeutic intervention. The period of late adolescence, which often coincides with that of studenthood, is, therefore, a time of considerable emotional turmoil associated with the quest for an increased level of independence following the lifting of many of the restrictions, often enforced by rigid discipline, previously imposed on them by the majority of schools. This seemingly new-found independence is, at times, in harsh contrast to the often equally rigid personal discipline required to meet the severe academic demands of university. This apparent dichotomy may often promote the development of various adjustment-related disorders affecting students presenting at the UCT-SHS-MHS. Likewise, the academic and developmental (maturational) process of converting an unskilled

school leaver into a skilled professional on graduation (which generally requires between 3 to 6 years of intensive study to achieve), could also result in various department and/or faculty-specific adjustment-related disorders requiring interventive psychotherapy. UCT-SHS-MHS counsellors should be (and generally are) aware of these unique university-related factors (environmental circumstances) pertaining to their patients and must, consequently, direct their interventions to address the manner in which these factors might influence the nature, content and outcome of presenting psychological or psychiatric complaints. Therefore, the presentation of these complaints is often entirely different to that expressed by the general (non-student) community.

Kidd and Caldbeck-Meenan (1966) state that psychiatric disorders occur among all groups of the general population, but that it would be difficult to suggest a group of young people in whom the consequences are more serious than that of university students. So much is at stake during the short time spent at university that students cannot afford to be ill for any reason, least of all from psychiatric disorders where the ability to study, the first requirement of all students, is especially impaired. Much of the concern with which university authorities view the mental health of their students is due not only to the widely-assumed relationship between psychological illness and poor academic performance (confirmed by Woodmansey, 1971), but also to an increasing awareness of the central role played by emotional factors in the adjustment of the young adult to the new, competitive and often demanding world of higher education. Maclay (1967) highlights the magnitude of this problem when she notes that mental ill-health is one of the most important reasons why undergraduates lose time from their studies or withdraw from university altogether.

3.2 THE MENTAL HEALTH SERVICE

This section of the Literature Review is divided into ten subsections. The first subsection provides an overview of student mental health services including their relatively low priority in the eyes of college/university authorities. The second subsection outlines the goals/function of the student mental health service which include, inter alia, a still highly relevant set of goals initially formulated by Williams, 1921, which promote the prevention of student exclusion or failure due to mental illness as well as proposals from the American College Health Association – ACHA – Task Force on Alcohol and Substance Use, 1987, and the American Psychiatric Association – APA – Task Force on College Mental Health, 1973. The third subsection briefly details student usage of college/university mental health services by highlighting factors such as accessibility that encourage and optimise attendance. The fourth subsection documents the types of programmes, including the counselling centre, offered by various colleges or universities to students affected by various mental disorders. The fifth subsection details recommended staff ratios which the UCT-SHS-MHS is well short of meeting. The sixth and seventh subsections overview the role of the student (mental) health service administration and protocol and mission statement formation, respectively. The eighth subsection outlines therapeutic principles applied for the treatment of student mental illness including brief psychotherapy and cross cultural psychotherapy. The ninth subsection

differentiates users from non-users of the mental health service including the results of studies detailing non-demographic differences between these two groups of students. The tenth subsection is a summary specifically linking the preceding material to the context of this thesis. Therefore, the main thrust of this section is to review the literature on student mental health services, although frequent reference will be made throughout as to how the UCT-SHS-MHS (previously described in Chapter 1) corresponds to this material.

3.2.1 Priority and Availability

> *As the demands for a college (university) education increase, as universities grow larger and more impersonal, as the pressures of academic life intensify, it becomes clear that more students are seeking help from the infirmary (mental health service) psychiatrists.*
>
> (Fox and Reifler, 1967: p. 136)

however

> *The usual personal, career, learning skills and financial problems that students may experience during the academic year in themselves may appear insurmountable given the meagre resources allocated within tertiary educational institutions to alleviate student problems.*
>
> (Nicholas, 1997: p. 279)

This statement by Fox and Reifler is patently an indictment of the college/university system which appears to be driving an ever increasing number of students to suffer from various mental disorders. They do, however, implicitly recognise the essential contribution of the mental health service in alleviating this growing problem – although this facility is not always appreciated by the college/university authorities. This statement by Nicholas is patently an indictment of college/university authorities who appear to consider student mental health as a low priority. Likewise, Buckle (1972) comments that student health services (including student mental health services) have, as a whole, often limped along inadequately housed, indifferently staffed and lacking in prestige within the university community. It would seem, then, that the maintenance and promotion of health (including mental health) and the treatment of illness (including psychological and psychiatric complaints) are not matters of high priority to university staff. Universities, the author continues, are often geared to weed out the unfit, and the primary gratification of many faculty members comes from their "bright", verbally gifted, receptive and subtly ingratiating students. Considerable resistance is met in persuading the faculties on the worthwhileness of less academically competent individuals. There are, in addition, certain specific resistances to psychology and psychiatry. The university's subcultural norms of intellectuality, "objectivity", and psychological distance between individuals are at direct variance with those of psychology and psychiatry, which stress the importance of the affective and unconscious elements of human mental life, value subjectivity and psychological mindedness and emphasise the desirability of emotional closeness between people.

Likewise, Howe (1970) notes that it has been suggested that the administrative and academic staff of colleges and universities that have not had much contact with psychiatry often need to learn more about it before they can help to assure that the mental health services are appropriately used. The author outlines two common misconceptions affecting staff: (i) only students who caused trouble from a disciplinary standpoint were suitable for referral to the mental health service, and (ii) students maintaining good academic grades could not be suffering from any "mental" difficulties.

Bhamjee (1990) notes that the importance of student mental health services as support facilities on university campuses was recognised by university administrators in South Africa. The author observes that factors contributing to the advancement of student counselling during the previous two decades were:

(i) University administrators in South Africa were influenced by the humanism movement which emerged from American universities in the late- and post-Vietnam period. The movement focussed on the 'humanisation' of college environments with an emphasis on self-development and self-actualising 'whole' individuals.

(ii) "The Committee of University Principals Conference of 1978, and the Van Wyk de Vries and SAPSE (South African Post Secondary Education) Commissions which determined funding formulae for universities accorded psychological services a valuable role in optimising talent by reducing failure and assisting to make career and curriculum choices more effective" (Cloete, Pillay and Swart, 1986: p. 21).

In a thesis documenting the staffing patterns and functions of student counselling (mental health) services at universities in South Africa (N = 30 as satellite campuses were treated as separate universities), Bhamjee (1990) notes that these facilities were established at 8 ex 13 (61,5 per cent) White universities and the correspondence university from 1945 to 1975. However, student mental health services were only established at the majority of Black universities (13 ex 16 – or 81,3 per cent) from 1976 to 1985. Therefore, the average age of these facilities at Black universities was 8,3 years whilst the average age of them at White universities was 20,0 years. This would suggest that the latter are likely to be at a more advanced stage of development.

Bhamjee (1990) further notes that student mental health services were distributed in universities with varying student populations: (i) 8 ex 25 (32,0 per cent) student mental health services were located in universities which had student populations of over 10 000 – one Black, six White and the correspondence university fell into this group; (ii) 3 ex 25 (12,0 per cent) student mental health services were based in universities with student populations between 7 000 and 9 999; (iii) 8 ex 25 (32,0 per cent) student mental health services existed in universities with student populations between 4 000 and 6 999 – five Black and three White universities fell into this group; (iv) 4 ex 25 (16,0 per cent) student mental health services were located in universities with student populations between 1 000 and 3 999 while (v) 2 ex 25 (8,0 per cent) of

student mental health services were found at Black universities which had relatively small student populations of under 1 000.

3.2.2 Goals/Function

> *The advancement of personal growth and development of the student through preventive and therapeutic care is a major goal of the (mental) health services. There continue to be institutional problems, particularly with regard to sources of support and then the allotment of resources, as well as difficulties in adjusting programs to the special personal and interpersonal needs of student-patients. But to help maintain students in good physical and emotional health is to contribute to the maximum utilization of our institutions of higher education.*
>
> (Hazard, 1975: p. 4)

This statement not only outlines the goal of the student mental health service but also documents some of the difficulties encountered in the process. These constraints to the delivery of an optimal preventive and therapeutic service are extremely relevant when considering the various goals/functions suggested by several authors, below, for such student service-orientated facilities.

Williams (1921) quoted by Arnstein (1995) states that the goals of a college/university mental health service should be: (i) the conservation of the student body, so that intellectually capable students may not be forced to withdraw but may be retained; (ii) the forestalling of failure in the form of nervous and mental diseases, immediate or remote; (iii) the minimising of partial failure in later mediocrity, inadequacy, inefficiency and unhappiness, and (iv) the making possible of a large individual usefulness by giving to each a fuller use of the intellectual capacity he/she possesses, through the sphere of conscious control and thereby widening the sphere of social control. These goals for a student mental health service formulated by Williams in 1921 are still extremely relevant to the UCT-SHS-MHS. Several references will be made throughout this research work to the association that exists between academic-related stress, combined with mental disorders and the subsequent development of academic impairment. This impairment can occasionally be sufficiently severe to render a student liable to exclusion from the University on academic grounds. Possible measures that the UCT-SHS-MHS could adopt to prevent intellectually capable students from leaving the University would include liaising with relevant academic authorities (including lecturers, heads of department and deans) and forwarding detailed medical reports (with the patient's consent) to these authorities outlining the nature of the patient's problem, his/her prognosis of recovery and recommendations concerning strategies to enhance the patient's academic performance. The second goal would involve the early recognition and treatment of psychological or psychiatric complaints to prevent the need for crisis intervention during the course of mid-year and, especially, end-of-year examinations which, by definition, would predispose the affected student to failure. The third and fourth goals, detailing the longer-term benefits to be derived from UCT-SHS-MHS treatment, would be achieved through appropriate psychotherapeutic intervention. Former UCT-SHS-MHS patients, free from the potential long-term debilitating effects of previously resolved mental health

problems, would consequently be able to deliver a more meaningful and effective life-time of service to the community rather than become the recipients of such community services.

The American College Health Association (ACHA) Task Force on Alcohol and Substance Use (1987) notes that the college or university (mental) health programme (as co-ordinated by the health service) should contribute to the overall institutional mission of education, research and service and to the specific academic and personal development programmes for students. It should take an active interest in the policies that affect students and contribute to the overall institutional effort to promote academic success, increase student retention and create a climate for learning. In order to achieve the above, the college or university (mental) health programme: (i) has a clear obligation to identify, and to the extent possible, control or advocate control of environmental factors that influence the health and safety of members of the student community; (ii) should offer health education and health promotion programmes designed to provide basic information designed to help students to adopt healthy lifestyles, to understand major health risks, to learn strategies to reduce risks, to improve self-care and to identify and manage personal behaviours that could lead to acute problems or long-term illness or disability; (iii) should identify special risk groups among the student population and develop special programmes for surveillance, treatment and education for those at special risk. These efforts should include, but are not limited to, periodic screening to identify at-risk students and publicity efforts designed to inform students and other members of the academic community of available services; (iv) should identify other institutional and community resources for treatment and education and should develop effective working relationships with these resources to increase service to students, and (v) should provide or arrange for effective staff development and training efforts for its own staff and others to insure the highest possible levels of staff awareness and competence to identify, treat, educate, refer, evaluate and follow up for the range of mental (health) and other disorders common to the population served by the programme.

In line with the above Task Force recommendations, Kabachenko et al. (1982) have noted that the core of college/university mental health services should be a commitment to the socio-psychological adaptation of students to the college/university system. Likewise, Miller and Rice (1993) note that, in order to assist students in working through their personal, social and academic difficulties while attending a college/university, the services provided by these institutions have become multi-dimensional in response to the varied needs of clients and the college/university community. Therefore, in order to maximise their roles as change agents who promote the social and psychological growth of students, it has been recommended that mental health services staff must frequently interact with students and staff to keep abreast of changing student needs (Carney, Savitz and Weiskott, 1979; Hurst and Ivey, 1991; Morrill and Hurst, 1971).

In a similar vein, The American Psychiatric Association (APA) Task Force on College Mental Health (1973) notes that the psychiatrist working in the college/university setting has a particular obligation to recognise those institutional conditions which affect individual functioning, both adversely and positively.

With this understanding he/she has the opportunity to contribute significantly to the process of constructive change. Both of these opportunities – to assist the individual and institution – are essential components of the psychiatrist's role on campus. The Task Force notes that psychotherapy on campus has obvious similarities to other psychiatric clinical situations, but that there are also some important differences, which include: (i) accessibility without the necessary definition of "patient role"; (ii) rapidity and appropriateness of the professional response to the felt need of the individual who is requesting help; (iii) particular attention to policies of confidentiality; (iv) recognition that problems of the student age group may be more responsive to minimal intervention, and (v) the special importance of understanding the social context in which the patient moves. In assisting the institution toward constructive change the psychiatrist must: (i) have a high degree of personal visibility on campus; (ii) accept the limits of his/her competence, especially in unfamiliar non-psychiatric areas, and (iii) facilitate communication on campus.

An alternative method of assessing the goals/functions of an idealised college/university mental health service would be to define them in terms of the potential needs of their student clientele. In this regard, Van Zyl (1993), quoted by Bergman (1994), provides the following list of student characteristics describing them as:

- representing an image-conscious group.
- surviving on a mean income.
- being highly demanding of resources to satisfy their needs.
- being intensely conscious of their human rights.
- trying everything to boost their physical and psychological make-up with minimal investment.
- displaying the propensity for risk and testing their abilities.
- being little concerned about the impact of physical, social and mental harm from their activities.
- being driven by severe group/peer pressure.
- being propelled by parent/family and societal expectations.
- having limited knowledge of real life.
- having the ability to get what they want.
- comprising a group that participated or still participates in practices which require vast sums of money to prevent (viz. alcohol dependence, drug abuse, eating disorders and high risk behaviour for contracting AIDS).

Correspondingly, in order to cater to these student characteristics, the idealised college/university mental health service should adopt the following measures to:

- promote health awareness strategies aimed at removing any stigma that image-conscious students may feel is attached to attending a mental health service.
- provide a cost-effective service that is financially accessible to all students – especially those who are subject to a limited income.
- provide as comprehensive a service as budgetary restraints permit in order to be able to successfully resolve the vast majority of presenting (or underlying) psychological or psychiatric complaints.
- ensure that all staff (including support staff) are always fully aware of the student's right to receive treatment that is, at all times, both courteous and professional.
- ensure that professional staff do not make excessive demands on, inter alia, the student's time.

- provide students with extensive information (primary prevention) regarding various activities that could, under certain circumstances, be harmful to mental health (e.g. the use of caffeine-based stimulants prior to writing an examination).
- provide students with further information – such as self-assertiveness training – that would assist them to avoid the unwanted effects of peer pressure.
- provide students with methods of coping with undue parental/family expectations.
- provide students with vocational guidance counselling to enhance their knowledge of not only potential pitfalls that may confront them but also of possible opportunities that may be available to them.

It is noteworthy that the UCT-SHS-MHS together with other student service-orientated facilities do, where circumstances permit, endeavour to deliver several of these services to students. However, they are generally only provided on an ad hoc basis where they are specifically relevant to the treatment of a patient and when time constraints permit their implementation. Ideally these services should be freely and universally available to any student who requests them.

Anderson (1994) established from South African counsellors that counselling in South Africa should have, inter alia, the following in its mission: (i) fulfil the education and training institution's goals; (ii) engage in relevant staff development programmes; (iii) promote development leading to successful graduation and a socially responsible and responsive climate; (iv) contribute to the development and effective placement of high level human resources for the country; (v) promote effective networking in the provision of psychological and educational services; (vi) recognise that individuals are an institution's most valuable asset; (vii) promote pro-activity, creativeness and entrepreneurship as valuable assets for the quest for excellence; (viii) recognise that its educational task extends beyond a classroom and includes the empowerment of students by enhancing their social, emotional and intellectual growth; (ix) provide a professional counselling service to all students including career, personal and educational counselling; (x) be committed to enhancing the all-round welfare and self-actualisation of all registered and prospective students; (xi) further the discipline applied through research and active participation in academic activities; (xii) assist the institution in establishing a fair and equitable student selection policy, and (xiii) disseminate institutional and career related information to schools and communities via career exhibitions and fairs, seminars and publications.

Bhamjee (1990) reports that, inter alia, the following functions were provided by local student mental health services: (i) referrals to and liaison with other professionals (100,0 per cent); (ii) career counselling (100,0 per cent); (iii) providing careers information (100,0 per cent); (iv) academic counselling (96,0 per cent); (v) personal counselling (96,0 per cent); (vi) study skills counselling (96,0 per cent); (vii) providing information on study skills (96,0 per cent); (viii) pre-university counselling for prospective students (88,0 per cent – with all White universities providing this service); (ix) orientation programme for new students (88,0 per cent – with all Black universities providing this service); (x) crisis intervention (84,0 per cent); (xi) graduate placement programme (80,0 per cent); (xii) conducting research (76,0 per cent – more common in White universities); (xiii) career-related testing services (76,0 per cent – more common in

White universities); (xiv) study skills workshops for students (72,0 per cent – more common in Black universities); (xv) conducting life-skills workshops for students (72,0 per cent); (xvi) providing consultation to student organisations (72,0 per cent); (xvii) providing information on financial aid (68,0 per cent – significantly more common in Black universities); (xviii) assisting student organisations in negotiating the administrative channels (64,0 per cent – more common in Black universities); (xix) training of peer counsellors (60,0 per cent); (xx) staff development training sessions for mental health service personnel (52,0 per cent); (xxi) teaching counselling skills to university staff (28,0 per cent), and (xxii) providing information on accommodation (28,0 per cent).

Gilbert (1992) observes that it is sometimes asserted that the goal of a college/university mental health service is primarily to assist students complete their education. Thus it does not have to cure or rehabilitate mental disorders but rather exists to prevent mental dysfunction from becoming severe enough to interfere with academic functioning. This argument is used to buttress a pattern of care for severely disturbed students characterised by intermittent crisis intervention and restabilisation. On the other hand, Gibbs (1975) states that the college/university mental health service can afford to be experimental, flexible and innovative without fear of losing its constituency or its funding. Thus, its unique position affords the opportunity to develop new strategies for both the delivery of services and the development of therapeutic techniques with members of minority and disadvantaged groups within the student population. The extent to which the college/university clinic can meet this challenge may determine the pattern for the coming era of community mental health.

Nicholas (1993), quoted by Bergman (1994), highlights the important role – especially within the Southern African context – of research conducted into local student counselling and health-specific practices. The rationale for including this research amongst the stated goals/functions of a college/university mental health service is to promote the following: (i) the prevention of illness leading to a decreased client load; (ii) the building of an indigenous knowledge base to permit an authoritative response to national problems; (iii) the development of a profile of students and their problems to facilitate intervention; (iv) more effective problem-solving by tertiary educational institutions in a region if they combined their efforts; (v) the development of a national research base which could influence national policy and inform theory; (vi) innovations at one university or SHS to become easily accessible to other institutions; (vii) highlight, through research-based findings, the critical necessity of addressing problems at school level so that they do not become college/university problems, and (viii) the obligation to perform vital research as college/university mental health professionals have both access to a highly dynamic and researchable student community and the legitimacy to conduct this research. It is with this spirit in mind that the UCT-SHS study has been undertaken – in the hope that it will fulfil a small role in providing relevant university (and other) authorities with information which would enable them to improve the quality of the tertiary education experience for all students registered at local universities and technikons.

In conclusion, Swartz, Posin and Kaye (1958) note that the problem of deciding what sort and how much service the psychiatrist/psychologist can provide to the student depends on: (i) the amount of money allocated for the purpose of the psychiatrist's/psychologist's time; (ii) the number of students seeking help, and (iii) the attitude of the administration and the medical colleagues of the health service. Likewise, Bhamjee (1990) notes that the university counselling (mental health) service is often guided by the aims and objectives of its institution. The author observes that the influence of the university's philosophy on the counselling service is clearly visible in the following lines which are an extract from a report of the Counselling Services Committee of Duke University in the USA. The following extract serves to reaffirm Duke University's educational philosophy which is based on a commitment to the holistic development of the individual student:

> *As an educational institution the University is obliged to provide the services necessary to maximize the potential of its student body ... From this perspective Duke University is dedicated to furnishing a full scope of counseling services with the realisation that these services should share an extremely close tie with all the other educational aspects of the university. The common goal of the educational and counseling activities should be to contribute to the development and personality growth of all students at Duke, not just those representing an extreme of maladaptive behaviour.*
>
> (Moorman, 1985: p. 35)

This quotation is of special relevance to UCT as the initial sentence closely approximates the Mission Statement of the University previously outlined in Chapter 1. However, this candidate is aware of the current (February 2000) non-existence of any related mission statement referring directly to the UCT-SHS-MHS which specifically outlines its therapeutic goals – although a broad outline detailing the "vision for the future" has recently been drafted.

3.2.3 Student Usage

> *The extent of use of the college (mental) health service is a measure of the care which has been used in planning services, how genuinely students have participated in the development and maintenance of the program, the quality of the care and the spirit in which it is provided.*
>
> (Hazard, 1975: p. 5)

This statement provides an eloquent overview of some of the factors that are responsible for the success or failure of a student mental health service. The author emphasises some of the responsibilities incumbent upon university authorities to ensure the delivery of a service that is acceptable to the majority of students. This administrative role is complemented, below, by an outline of student attitudes toward and expectations of the college/university mental health service.

Reinhold (1973) states that an obvious precondition to utilisation of a helping service is: (i) knowledge that it exists and (ii) some understanding of or an assumption about the nature of its services. Amaranto and Wepman (1978) state that of the factors that have affected the growth of a MHS on a particular medical campus, the following were seen as having been the most important: (i) confidence in the MHS as an agent of the students and not of the college/university; (ii) sufficient staff so that problems can be attended to on an immediate basis, and (iii) location of the MHS in a relatively inconspicuous place. The following socio-political and institutional factors outlined by Agar and Hofmeyr (1989) identifying promising elements of successful Academic Support Programmes (ASPs) can be transposed to a successful mental health service that will be used by students: (i) legitimacy in the eyes of students and academics; (ii) power and influence insofar as the top people in an MHS must have legitimate power and influence within the institution as a whole in order to prevent the inevitable bureaucratic demands of the institution from blocking the mental health needs of the programme, and (iii) experienced staff insofar as a high staff turnover is a problem as staff are not around long enough to gain experience and benefit from evaluations and feedback. In addition, Sharp and Marra (1971) suggest that mental health services and other service agencies may vary in the students they attract from campus to campus. This may be a function of: (i) the staff; (ii) the campus climate; (iii) the range of services available, and/or (iv) the students attracted to a particular campus.

The principle of the UCT-SHS-MHS being an agent of the students (and thereby belonging to them) rather than an instrument of the University authorities (and thereby exercising control over them) is important as it requires, inter alia, strict confidentiality of information volunteered by the student during the consultation process with the UCT-SHS-MHS therapist or medical officer. Suitable protocols have been developed and must be routinely and uniformly enforced by UCT-SHS management and staff to restrict access to this highly sensitive and often (potentially) damaging material, thereby inhibiting the free flow of this information to various academic and administrative departments. As the University of Cape Town, partly due to a decrease in central government funding, is subject to increasingly limited financial resources it is currently not feasible for the UCT-SHS-MHS to acquire additional staff to cope with an increasing number of patients presenting there with increasingly complex psychological and psychiatric complaints. This unfortunate reality, which often leads during peak periods of demand to a delay of 24 to 48 hours (or more) for non-emergency presenting complaints, is often a source of profound dissatisfaction to students. Therefore, the UCT-SHS-MHS cannot uniformly provide students with the idealised service outlined above by Amaranto and Wepman. The principle of the UCT-SHS-MHS being located in a relatively inconspicuous place to allow presenting students some degree of privacy from their peers rather than being positioned in the heart of main campus is important as it helps reduce the additional anxiety associated with peer recognition of attendance – especially when this represents a highly undesirable (and threatening) situation to the patient concerned. This principle is potentially in conflict with that of accessibility previously discussed in the Conceptual Background of Chapter 2. These concepts are, however, not necessarily mutually exclusive although detailed planning needs to be undertaken to strike an appropriate balance between patient privacy and accessibility – the newly sited UCT-SHS-MHS, which is situated off main campus in a fairly inconspicuous location at Protem campus,

yet adjacent to several of the major University-administered residences, appears to strike the appropriate balance.

3.2.4 Types of Programmes

Bloom (1970 a, b) and Winer et al. (1973) for the purpose of conducting surveys to determine the nature of college and university-based mental health activities have defined five different types of student mental health programmes: (i) a medical-psychiatric service which is part of the student health programme; (ii) a counselling centre administratively distinct from the student health service; (iii) a special facility, developed mainly for training, attached to a particular department such as psychology; (iv) an evaluation or referral service attached to a dean's office or other non-medical college/university administrative unit, and (v) "others", which the respondent was asked to specify. Likewise, Whiteley, Mehaffey and Geer (1987) quoted by Bhamjee (1990) characterised five different types of student mental health centres (services) according to functions offered: (i) a macrocentre which provided a wide range of services but focusing extensively on counselling and career-related services, testing and outreach and training; (ii) a centre with a predominant emphasis on career-planning and placement; (iii) a centre with a definite emphasis on personal counselling functions; (iv) a general purpose centre which provided a general level of services, and (v) a microcentre which provided some counselling services and a minimal level of services in other areas.

The type of mental health programme offered to students by the UCT-SHS-MHS most closely resembles the first type of programme defined by Bloom (1970 A and B) and Winer et al. (1973) insofar as it offers a medical-psychiatric service comprising UCT-SHS medical officers and a sessional psychiatrist augmented by psychologists. However, as previously mentioned in Chapter 1, the UCT-SHS-MHS is not a separate administrative entity distinct from the UCT-SHS. It also has no specific training function and is not attached to the dean's office. Likewise, the function of the UCT-SHS-MHS most closely coincides with the third type of mental health centre defined by Whiteley, Mahaffey and Geer (1987) insofar as it has a definite emphasis on personal counselling functions. The University has a separate Careers Office which concentrates on career-related services with a graduate placement programme and a Student Advice and Development Centre (UCT-SADC) which assists students with various non-academic problems. The general purpose centre or the macrocentre if a training component were to be introduced would become feasible if the UCT-SHS-MHS, the Careers Office and the UCT-SADC were consolidated under one roof. This step would also facilitate closer co-operation between these student service-orientated facilities.

Bloom (1970 a, b), in a comprehensive survey of college/university-based mental health activities in the Western United States, found that colleges and universities with medical-psychiatric clinics averaged 11 000 enrolled students, those with counselling centres averaged 9 000 students and those with other types of programmes averaged less than 7 000 students. Winer et al. (1973), however, in their survey of the 22 universities in the State of Illinois, found a different situation, insofar as universities offering medical-

psychiatric clinics also averaged 11 000 students, but universities offering counselling centres averaged 16 000 students, and those with other types of programmes averaged 15 000 students. However, the authors note that the Illinois universities with larger student enrolments were more likely to offer multiple mental health programmes. It is noteworthy that the University of Cape Town, which is served by a single professional counselling service (the UCT-SHS-MHS which also employs a sessional psychiatrist), currently has a student population in excess of 14 000.

3.2.5 Recommended Staff Ratios

Schwarz (1967) states that the American College Health Association (ACHA) Recommended Standards and Practices for a College Health Program (1961), while allowing for wide variations in local needs and local facilities, recommends that, in general, an adequate ratio for a student health service is one physician (medical officer) and one nurse per 1 000 students enrolled in the institution. The author states that this ratio may appear high, particularly on larger campuses, but it probably has to be met at some universities so that intensive research can be carried out. It may be on campuses where the respective ratios are extremely low so that physicians (medical officers) and nurses cannot give adequate time to each individual student who presents at the health service that students complain about the service.

The author notes that the adequate ratio of number of psychiatric team members, e.g. psychiatrists, psychologists, social workers, etc. per 1 000 students had not (by 1967) been clearly defined. One way, he suggests, to calculate this is from the expected incidence (or prevalence) of emotional disturbance and the average duration of treatment. It appears that 5 per cent of students will need the facilities of a psychiatric service, and that each of these students will need, on the average, 6 interviews (consultations), each consultation being about one hour in duration. Thus, a psychiatric service serving 10 000 students would require a total of 3 000 hours of psychologist and psychiatrist treatment. In addition, however, in order to practise preventive psychiatry and perform research that will promote the optimal atmosphere for learning, each member of the psychiatric team should spend about one-half of his/her time in individual student treatment, and the other one-half in liaison and research activities. Thus, on the campus with 10 000 students, about 6 000 hours of staff time should be provided. This would be concentrated in a period of approximately 30 weeks (circa early March to mid-November at the University of Cape Town) thereby translating to about 200 hours of work from the psychiatric teams per week. If each member of the team works a 40 hour week, this college/university would require the equivalent of 5 full-time members of the psychiatric team as a minimum, thereby providing a ratio of 0,5 psychiatric team members per 1 000 students. UCT, with a student population in excess of 10 000 students, is staffed by a part-time (five-eighths) clinical psychologist, four sessional clinical psychologists, a sessional psychiatric social worker and a sessional (once weekly) consultant psychiatrist. This staff ratio is clearly well short of that recommended by Schwarz (1967). Consequently, the UCT-SHS-MHS is impeded from practising preventive psychiatry or conducting any meaningful research due to this lack of professional services.

Bhamjee (1990) documents that student mental health services at Black South African universities employed a total of 46 full-time and 3 part-time staff while those at White universities had a total of 93 full-time and 11 part-time staff and the correspondence university 7 full-time and 2 part-time staff. The author states that this difference in the distribution of human resources is evidence concerning the disparities in resources for Blacks and Whites in South Africa.

3.2.6 Role of Administrator/Director

According to the American College Health Association (ACHA) Task Force on Alcohol and Drugs (Substance Use) (1987) each administrator (director) of a college/university health programme (mental health service) should possess the knowledge and skills sufficient to critically examine the effects of *mental disorders** in his/her college/university health service, including a review of policies, protocols, and staff competencies to meet the needs of patients. These include: (i) developing and assessing treatment protocols to assure the presence of appropriate attention to possible *mental (health) problems** in common clinical presentations; (ii) assessing college/university policies to insure appropriate health service involvement in case finding, treatment, and referral; (iii) developing and implementing quality assurance plans; (iv) arranging for and assessing referral arrangements with local treatment providers; (v) evaluate patient satisfaction with services; (vi) consulting with other campus officials on areas of risk; (vii) assessing institutional relationship with student affairs and academic affairs units (departments); (viii) assessing institutional *mental health problem** policy(ies); (ix) being knowledgeable on ethical and legal requirements, and (x) securing appropriate training and funding resources to carry out the programme's mission.

The director of the UCT-SHS, who is responsible to the deputy-registrar of the Student Affairs Department (UCT-SAD/SAF), is expected to fulfil most of these criteria. However, financial restraints which have resulted in sub-optimal staffing ratios (refer to previous sub-section) have placed a heavy clinical load on the medical officers, psychologists and psychiatrist. This, in turn, has made it impossible to consistently screen for underlying mental health problems in common clinical presentations or to adequately evaluate patient satisfaction with services delivered. In addition, due to these staffing restraints, neither the UCT-SHS or the UCT-SHS-MHS is able to screen the student community to identify students affected by mental illness. Frequent head-of-section (HOS) meetings attended by the director of the UCT-SHS facilitate consultation and co-operation between the student service-orientated facilities of the UCT-SAD/SAF. Although the UCT-SHS-MHS does not have a formal training function, the director places great emphasis on continuing staff development.

* The original article referred to alcohol and substance use and misuse – any further references to this field in the article that have been similarly adapted to reflect mental health problems are marked in italic.

3.2.7 Protocol and Mission Statement Formation

Farrell (1994) states that protocols are a vital part of college/university healthcare systems, where they are used for standardisation and continuity of care. All college/university health protocols include basic guidelines related to common healthcare concerns, although each institution individualises its protocols to suit its setting, staff, and client (patient) population. Protocols can be used to achieve quality patient care and precise risk management. Each professional in college/university health should participate in developing a protocol that is relevant and sensitive to his/her specific activities and setting. Developing this type of protocol consists of five steps: (i) preparing a detailed job description for each position, identifying all activities and tasks required for the position the protocol addresses; (ii) examining available literature from respected, reliable, valid current sources to identify expected criteria for care; (iii) synthesising the standards of care in the literature with the specific protocol needs of the position, the work environment, and the client (patient) population; (iv) compiling a unified document listing minimal standards for acceptable care, taking into consideration applicable laws, and (v) writing the protocol for a position based on the minimal standards that have been identified and reflecting standards of care that are equal to or higher than those standards. The UCT-SHS has detailed job descriptions for each category of professional and support staff. There are also a limited number of treatment protocols detailing therapeutic procedures for various medical (especially) complaints which are compatible with the latest clinical directives outlined in the literature. The UCT-SHS, despite its documented sub-optimal staffing ratios, always strives to deliver a service that is well in excess of the minimal standards for acceptable care.

In order for the student (mental) health service to achieve its mission, The American College Health Association (ACHA) Task Force on Alcohol and Substance Use (1987) advocates that each college or university (mental) health programme should have a clearly written statement: (i) setting forth the goals of its programme (including those parts of its programme that it will not directly provide but will arrange for treatment in the campus community or elsewhere); (ii) indicating how the programme relates to and is integrated with other campus policies or programmes, and (iii) outlining the specific roles of health care providers and other members of the health care team with respect to *mental disorders*. As previously mentioned, the UCT-SHS-MHS does not currently possess a mission statement although a broad outline detailing "the vision for the future" has been drafted.

3.2.8 Therapeutic Principles

Blaine and McArthur (1966) note that college/university students are at a stage of development that is both remarkably vulnerable and remarkably treatable. They are flexible, impressionable, elastic and resilient, but also brittle when hit too hard. They often bend into bizarre forms but are still malleable enough to return to conventional appearance with gentle and patient handling. They are usually in a mood to talk – to discuss

values, ethics, motivations, life, death, suicide and so forth. They are often anxious for guidance – direct advice too – from someone whom they believe is bringing order out of their own chaos, not superimposing direction on them or trying to get them to conform to a family pattern. In other words, they want help toward self-expression – toward being themselves – not moulding by someone who has preconceived ideas about how young people should behave. If therapy is offered in this spirit, the adolescent responds in a most gratifying manner. They accept interpretations with interest and curiosity without resenting them and without being frightened by them. Their behaviour, their productivity, and their degree of happiness often change markedly for the better in a short period.

The American Psychiatric Association (APA) Task Force on College Mental Health (1973) notes that psychotherapy on campus has obvious similarities to other psychiatric clinical situations although there are also some important differences. These include: (i) accessibility without the necessary definition of "patient role"; (ii) rapidity and appropriateness of the professional response to the felt need of the individual who is requesting help; (iii) particular attention to policies of confidentiality; (iv) recognition that problems of the student age group may be more responsive to minimal intervention, and (v) the special importance of understanding the social context in which the patient moves.

Buckle (1972) states that, in planning psychotherapeutic intervention, the primary goal of maintaining ego function for continued performance in the college/university setting must be kept in mind. In general the therapeutic alternatives are: (i) a fairly brief period of support and guidance; (ii) a more involved and lengthy therapy directed toward increasing the student's capacity to tolerate anxiety and depression, and reorganising defences toward more adaptive and less narcissistic aims, and (iii) arrangements for more intensive and extensive treatment through resources outside the university health services. It is indeed one of the primary goals of therapists and medical officers attached to the UCT-SHS-MHS to assist patients, where possible, to achieve and maintain the required academic standard demanded by the University. Often it is academic-related stress that, de novo, causes mental disorders, although underlying psychological or psychiatric complaints can, in turn, lead to a severe decline in academic performance. Either way, impaired academic performance, if sufficiently severe and prolonged, can lead to subject failures requiring supplementary examinations and/or course repeats which burden affected students with extra years of study (and associated expenses) and, at worst, can lead to exclusion from the University on academic grounds. Due to limitations in staffing, the UCT-SHS-MHS generally offers patients a maximum of six sessions for psychotherapeutic intervention (although there are some notable exceptions to this rule), with referral to agencies outside the University if more extensive (long-term) treatment is required. Therefore, the UCT-SHS-MHS largely adheres to the first and third therapeutic alternatives outlined above by Buckle and, only in exceptional circumstances, offers Buckle's second alternative.

This subsection is divided into three subheadings. The first subheading provides an overview of brief psychotherapy including its requirements of both the therapist administering it and the student receiving it. There is also an analysis of the rationale behind the effectiveness of the brief psychodynamic therapy

provided at the UCT-SHS-MHS. The second subheading outlines difficulties associated with the provision of cross-cultural psychotherapy which is often the treatment provided by the predominantly White female resident therapists to historically disadvantaged Black students attending the UCT-SHS-MHS for evaluation and/or therapeutic intervention of psychological or psychiatric complaints. The third subheading concludes with a brief description of four models for the provision of psychotherapy, including the use of peer counsellors that could be employed by University authorities to deliver an improved and more effective service to the student community.

3.2.8.1 Brief psychotherapy

Buckle (1972) notes that lecturers, tutors, student health physicians and students themselves provide brief supportive psychotherapy, in which the emphasis is on suppressive intervention by the use of suggestion, persuasion, reassurance, praise, manipulation and counselling in the sense of giving advice.

Alston (1974) states that the therapist has available a limited number of consultations in which he/she must: (i) gain some clinical understanding of the student; (ii) afford some easement to the student's distress if possible, and/or (iii) assess the need and possibilities for referral. Pinkerton (1994) notes that for brief psychotherapy (defined as less than or equal to 5 sessions) to be successful the student must posses: (i) motivation; (ii) a healthy ego; (iii) rapid insight and the ability to learn about himself/herself; (iv) the desire to reduce emotional pain; (v) the need to preserve autonomy, and (vi) the capacity of trust already in place. The therapist, in turn, must possess an attitude which includes: (i) comfort with authority; (ii) a willingness to speak with confidence regarding formulations; (iii) satisfaction in working within a very brief time mode; (iv) belief in its effectiveness; (v) the capacity to establish a positive and rapid working relationship with the student, and (vi) the ability to allow the student to determine the endpoint, while leaving the door open for future contacts. However, Allen and Janowitz (1964) note that there are limitations to short-term psychotherapy insofar as one could not expect profound personality change, extreme increment in "happiness" or greatly improved social effectiveness after four or five interviews (cf: six interviews offered at the UCT-SHS-MHS). Similarly, Deutsch and Ellenbogen (1973) report that the alleviation of a presenting symptom during the course of brief psychotherapy in a college/university mental health service does not mean that the student would be free of recurrences of the symptoms or of a residue of underlying difficulties that may surface at another time.

Taljaard-Plaut and Strauss (1998) – the former and current chief psychologists at the UCT-SHS-MHS – outline the rationale behind the effectiveness of the brief psychodynamic therapy provided at the UCT-SHS-MHS. They believe the adoption by resident therapists of psychoanalytic principles rather than a crisis intervention model has led to this success. They state that brief psychodynamic therapy deals not only with the presenting problems but also aims at giving the student the experience of understanding his or her family and personal dynamics within the context of the problem presented. Unlike the crisis intervention model, the focus of the therapy is not on a single event or experience. Rather, it offers an exploration that

assists students to understand how the presenting event or experience represents other previous events, how it has become constellated in the here and now, and how this is causing them difficulties in their relationship with themselves and others. The authors feel that part of the effectiveness of short-term therapy is due to the student's experience of a relationship in which the therapist is at pains to understand empathically not only the nature of the distress felt at the moment but also to understand the distress within the context of the background history, family dynamics and development. They conclude by stating that the therapeutic intervention performed in six sessions is often only the beginning although many issues may have been addressed. Therefore termination of therapy need not necessarily be seen as a final closure but rather as leaving the student with a sense of direction for possible future intervention.

Furthermore, Gilbert (1992) notes that the students with the most severe disorders present a formidable challenge: a multiplicity of symptoms, self-mutilative behaviour, concurrent substance abuse or eating disorder, impulsivity and acting out, difficulty in forging a working therapeutic alliance, prior hospitalisation and a history of treatment failures with multiple therapists. Even higher functioning personality disordered clients are believed to be ill-suited for a short-term treatment model. The need for psychopharmacological and psychiatric intervention, according to the author, typically warrant referral to external mental health resources. It is noteworthy that the UCT-SHS-MHS offers both of these services but still endeavours to retain the maximum of six consultations per student. Occasionally, if referral is contraindicated and/or it is in the patient's best interest to continue receiving therapy at the UCT-SHS-MHS, the chief psychologist is prepared to waiver this directive.

3.2.8.2 Cross-cultural psychotherapy

Gibbs (1975) notes that a Black student, particularly one from a disadvantaged background, may need more environmental change to alter his/her problems and may need guidance in dealing with the college/university bureaucracy. Therefore, it is often necessary to help the student to alter his/her environment by facilitating appointments with housing, financial aid, or tutoring personnel. (The interrelationship between these facilities at the University of Cape Town and the UCT-SHS-MHS will be highlighted in the Discussion Chapter.) The author comments that what may appear as passivity or resistance in these students is frequently an overwhelming feeling of inadequacy and a resigned acceptance of their unhappy fate, since their earlier experiences in the ghetto (or South African equivalent) have reinforced their notions of helplessness to change situations that are both degrading and debilitating. According to Comer (1972) the therapist must help the Black student deal with basic feelings of inferiority, worthlessness, hostility, anger and fear, all of which impede his/her development as a person and negatively affect his/her academic performance and his/her interpersonal skills. In order to develop his/her full potential, a Black student has to learn how to cope with such feelings and to channel some of these feelings of aggression and hostility into more constructive efforts.

Davis and Swartz (1971) note that if psychotherapy is initiated, the therapist will most likely be White and will probably be viewed as an alien person unable to understand the personal and sociological pressures that are obvious and inescapable to a Black person. On the other hand, a Black staff member has a special background and knowledge enabling him/her to "tune into" the Black student as well as to represent an identity model. In many theoretical articles on counselling Blacks, Atkinson (1987) notes that the authors were not optimistic that counselling pairs composed of a White therapist and a Black client could be effective. White therapists' lack of knowledge about Black experiences and insensitivity to Black values frequently have been cited as impediments to effective counselling (Calia, 1966; Smith, 1967; Vontress, 1971). Furthermore, many authors argued that the socialisation of Whites and Blacks in a basically racist society results in barriers to counselling when the therapist and client are racially different. These barriers to the counselling process include: (i) transference (Vontress, 1976); (ii) counter-transference (Gardner, 1971; Jones and Seagull, 1977; Wilson and Calhoun, 1974); (iii) client expectations of failure (Burrell and Rayder, 1971; Tucker and Gunnings, 1974; Wilson and Calhoun, 1974); (iv) client resistance (Vontress, 1976): (v) counsellor/therapist stereotyping (Smith, 1977), and (vi) White guilt (Jones and Seagull, 1977). Atkinson (1987) notes that there is research evidence to suggest that racial similarity between therapist and client may be a determining factor in counselling effectiveness, at least for some Black clients and some White therapists. Some Black clients, such as those at the immersion stage of Black Identity Development (Cross, 1971; Helms, 1990) may find it impossible to work with a White therapist while, conversely, some White therapists, particularly those who harbour conscious and unconscious racial biases, will not be able to function effectively with Black clients. However, Atkinson et al. (1986) report that, although Black students expressed a preference for Black therapists, they rated the therapist's education, attitudes and values, age and personality ahead of racial similarity in their preferences for therapist characteristics.

Anonymous (1986), Dawes and Davids (1983), Salagaram (1983), Tukulu (1983), Van Schoor (1986) and Van Zijl and Fouche (1984) contend that in South Africa, student counsellors and the counselling profession in general, seem to have been slow in recognising the fact that it serves a multifaceted society and that it needs to accommodate this reality in order to provide a relevant service to its clients. Van Schoor (1989) comments that if it is accepted that in South Africa the culture defining group (CDG), which shapes the ethos of the society (still largely) adheres to White, male, middle-class and capitalistic values and that student counsellors are trained to espouse these values, it can be expected that they will often be faced with group validity patterns which they are not familiar with. This situation is particularly true with reference to intergroup differences across race which, until recently, was quite rigidly institutionalised in South Africa (Tukulu, 1983). As the UCT-SHS-MHS therapists are still predominantly White, female and middle-class, cross-cultural psychotherapy must be practised each time the patient is a historically disadvantaged Black student.

Essandoh (1995) states that Eurocentric and Afrocentric views on the aetiology of mental illness and psychological disorders tend to be quite different. Whereas Eurocentric views are more research and theory based, indigenous African aetiological theory of mental illness and psychological disorders is still

profoundly rooted in socio-cultural and spiritual foundations. Mental illness or psychological disorders are for the most part attributed to evil machinations of enemies who use witchcraft and other magical/cosmic means to afflict their victims. Therefore, when most African college/university students find themselves in a Western culture, their traditional beliefs and values and their expectations about treatment will clash with Western scientific values. Depending on how deeply these beliefs and values are held, the African student's behaviour and attitudes towards counselling may be influenced. Likewise, when the new environment makes it difficult for the African student to maintain links with family members for certain ceremonies and rituals, it makes for strong feelings of disconnectedness.

The rapid urbanisation and upward mobility of particularly Black people emphasise that a stereotypical therapeutic approach cannot be used and that intra-group difference should be taken into account (Atkinson, 1987; Musikanth, 1983; Sue and Zane, 1987). Van Schoor (1989) notes that clients cannot be judged at face value but that therapists should acknowledge the complexity of their clientele and each person should be treated on his/her own merit.

Other authors have suggested ways in which the therapist can overcome the barriers to cross-racial counselling: (i) increasing self knowledge by talking to White and Black colleagues about potentially racist attitudes and organising discussion groups on this topic (Jones and Seagull, 1977); (ii) learning about Black experiences and lifestyles by reading books on Black history and culture (Jones and Seagull, 1977), and (iii) direct involvement in the Black community as a method of increasing therapist sensitivity to the Black experience (Vontress, 1971). In addition, Nicholas (1992) suggests that mental health services can make a significant contribution in fostering an anti-racist ethos on campus by: (i) actively fostering anti-racism within the mental health service itself; (ii) identifying racism as a high priority topic in workshops, seminars and groupwork; (iii) mediating in racial conflict; (iv) developing expertise in all aspects of racism, and (v) being highly visible as a refuge and advocate for victims of racism. UCT's mission statement commits the University to non-racism. The UCT-SHS-MHS certainly shares this vision but the documented sub-optimal staffing ratios prevent it from actively conducting workshops and seminars on this important topic. UCT has other venues (e.g. Equal Opportunities Office and African Gender Institute) where racial conflict can be addressed.

3.2.8.3 Provision of psychotherapy

Flisher (1978), investigating student attitudes towards the usefulness of various counselling services to be provided at a future mental health service (prior to the establishment of the UCT-SHS-MHS), proposed four models for the provision of psychotherapy: (i) counselling given by professional psychologists as (according to the author) this service is probably provided by all college/university mental health services; (ii) counselling given by post-graduate psychology students as mental health services often provide as part of their function an internship programme for students in counselling; (iii) counselling given by students who have undergone a special course in counselling as these students would probably have to be used in the

mental health service owing to a shortage of personnel who are professionally trained and post-graduate psychology students, and (iv) the organising of small groups with a trained leader where students with similar problems could get together and discuss them. The author notes that although respondents were impressed with the first option of a professional counselling service, the other three options providing counselling by fellow students was not favourably received. The UCT-SHS-MHS, in line with these findings, does only offer a professional counselling service. Peer counsellors, if judiciously employed to work in isolated areas where they have previously been shown to be effective such as assisting students with the development of social and assertive skills and providing support during crisis periods (McCarthy, Wasserman and Ferree, 1975), might help to reduce the clinical load of the UCT-SHS-MHS therapists, thereby enabling them to deliver an improved and more effective service. This, in turn, would allow them to see more students in need of assistance and become involved in various preventive and educational programmes.

3.2.9 Users versus Non-users

This subsection is divided into five subheadings. The first subheading provides an overview of users and non-users of psychiatric facilities by highlighting social, inter alia, differences in the self-perception of mental illness. The second subheading outlines the prevalence of mentally ill students who are non-users of mental health services. The third subheading indicates possible reasons why certain students make a conscious decision not to use these facilities while the fourth subheading documents alternative resources available to mentally ill students which include the "lay referral system" as well as family and friends. The fifth subheading relates differences and similarities between these two groups of students by detailing the results of studies conducted in US colleges and universities. This section addresses non-demographic, academic, residential (home address) and financial assistance factors (viz. personality and culture) that are not addressed by Objectives 2 and 3 of this thesis.

3.2.9.1 Self-perception of mental illness

Linn (1968) notes that several studies (e.g. Srole et al., 1962) of the prevalence of mental illness in the general population have demonstrated that there are large numbers of people who manifest psychiatric symptoms but neither define themselves as having a psychiatric problem nor see themselves as being in need of professional psychiatric attention. Also, a number of descriptive studies have shown that different social, cultural or psychological characteristics of those defined as mentally ill seem to play an important part in the different ways in which they seek (or do not seek) treatment (Mechanic, 1962; Myers and Roberts, 1959) and in the different ways in which they will recognise and define symptoms (Linn, 1967). Linn (1968) notes that all these findings are suggestive that psychiatric symptoms alone are not sufficient for explaining the utilisation of psychiatric facilities and that in order to understand more fully why people

seek psychiatric care, it is also necessary to examine the social, psychological and social-psychological forces which are operative.

Several studies have indicated that high risk first year students generally do not tend to make use of preventive programmes or counselling facilities offered by colleges/universities (Baker and Nisenbaum, 1979; Baker and Siryk, 1986; Bloom, 1971; Mathiasen, 1984). Friedlander (1980) attributes this failure primarily to methods used to identify and encourage such students to participate – insofar as neither voluntary, nor compulsory, participation requirements were apparently successful. Instead, the author suggests that campus staff take the initiative in identifying and subsequently approaching high risk students.

3.2.9.2 Prevalence of ill non-users

Rimmer et al. (1982) report that less than one-third of a randomly selected group of students (N = 158) attending Washington University, who were assessed to be psychologically ill (employing an annual systematic structural interview) used counselling or psychiatric services (viz. from half to three-quarters of non-users of student mental health services have significant emotional difficulties). The authors note that similar low usage/utilisation rates have been noted by numerous other investigators, using a variety of instruments to make a judgement as to psychological illness or impairment. This research therefore measures an outcome defined by either counselling or psychiatric service utilisation or non-utilisation rather than assessing the mere presence or absence of mental illness in the student community. By including this additional data, this study transcends the prevalence studies (with the exception of Pearlman, 1966, which, inter alia, also highlights mental health service usage) previously appearing in Section 3.1.3.4.e(iv). It can also be viewed in terms of the results obtained by Segal et al. (1966) employing the MMPI to develop a profile characterising students who were assessed as "moderately to severely impaired" and who would be more likely than others to be seen by a psychiatrist during their college/university careers outlined immediately below the prevalence studies in subdivision e(v).

It is important that the UCT-SHS-MHS delivers an appropriate and user-friendly service to all students presenting there with psychological and/or psychiatric complaints as their less outgoing friends affected by similar concerns and problems, who also require evaluation and/or therapeutic intervention, will be encouraged by positive reports to utilise this student service-orientated facility. Therefore, by successfully treating one affected student, the UCT-SHS-MHS will be able to extend its psychotherapeutic services to a considerably larger student community which would substantially benefit from this type of intervention. This networking between patients, their friends and other concerned residence students, inter alia, could form the basis to programmes fulfilling the four facets of community psychology as proposed by Lewis and Lewis (1977).

3.2.9.3 Reasons for non-usage

Snyder, Hill and Derksen (1972) compiled a questionnaire to gather information concerning student attitudes towards the mental health service (counselling centre) and administered it to 181 psychology students attending Southern Illinois University. The authors derived five different scales from their instrument to assess the reasons why respondents would not use university counselling services. The first scale concerned student attitudes toward the effectiveness and usefulness of counselling and included the following items: (i) A stranger couldn't really understand my problems; (ii) My problems are none of a counsellor's business; (iii) It's best to solve your own problems; (iv) Anything the counsellor might conclude about me would probably be inaccurate; (v) The centre is okay for vocational and educational problems but not for personal and social problems; (vi) Counsellors should only be concerned with areas of vocational adjustment. The second scale involved details about obtaining an appointment at the centre and attitudes toward the counselling process, per se, and included the following items: (i) The counselling process at the centre takes too much time; (ii) It's difficult to get an appointment to see a counsellor at the centre; (iii) Counsellors are not warm and understanding; (iv) The centre is inconvenient; (v) The counsellors at the centre do not take the time to meet each client's needs; (vi) There's too much red tape involved in going to see a counsellor at the centre; (vii) Counsellors at the centre do not treat each student as an individual; (viii) There's a complete lack of organisation at the centre. The third scale evaluated information about the centre's existence, trustworthiness and effectiveness and included the following items: (i) I don't know anything about the centre; (ii) Tests utilised by the centre are a waste of time; (iii) I don't know what's involved in going to see a counsellor at the centre; (iv) I didn't know there was a centre here; (v) You can't trust anyone at the centre. The fourth scale investigated the stigma associated with counselling (which the authors note could also be regarded as a measure of self-regard) and included the following items: (i) I'd rather do anything than go for help; (ii) My parents would not approve if they knew I went to a counsellor when I needed help; (iii) I wouldn't want my friends to know I went to a counsellor; (iv) People might think I were crazy if they knew I went to a counsellor. The fifth scale assessed the students' counselling readiness and included the following items: (i) My personal problems are not important enough to bring to the centre; (ii) For some of my problems, I would go to a counsellor.

This list of items from the five different scales provides deep insight into the reasons why certain students will not attend the mental health service often despite the presence of severe functional impairment. Several of these items, especially those relating to the first, fourth and fifth scales, revolve around common misconceptions concerning the psychotherapeutic process. These myths must be actively countered with appropriately targeted outreach programmes so that any individual affected by mental illness will feel comfortable approaching the UCT-SHS-MHS. Otherwise, continued non-usage of the UCT-SHS-MHS could be associated with ongoing mental disorder eventually leading, at worst, to possible voluntary withdrawal or involuntary exclusion on academic grounds from the University. On the other hand, several of these items, especially those relating to the second and third scales, directly concern the promotion, organisation and staffing of the mental health service. The latter two aspects, covered by the second scale,

would suggest that either the students or a close acquaintance had previously sought assistance and, for various reasons, been unimpressed with the level of service provided. The documented sub-optimal staffing ratios affecting the UCT-SHS-MHS might, indeed, have a negative impact upon the delivery of certain services although a combination of good staff motivation and careful planning should overcome many of these potential problem areas. A student who defaults from therapy because of dissatisfaction with the system could, like the non-attendee above, be subject to the same potentially preventable career-threatening situation.

3.2.9.4 Alternative resources

Friedson (1950) suggests, with respect to illness in general, that ill people exhaust other alternatives, using other sources of help and advice, before they seek the aid of qualified professionals. These other alternatives are referred to as the "lay referral system", which may include traditional healers for historically disadvantaged Black students, whose effects are more pronounced under conditions of: (i) greater community solidarity among laymen, and (ii) greater disparity between lay and medical subcultures. Parham and Tinsley (1980) and Strong, Hendel and Bratton (1971) observe that potential clients believe that their social-emotional problems are more appropriately handled by informal support networks (e.g. friends, parents, relatives) rather than by therapists. Therefore, professional services are more appropriately sought only after the helper's primary support system has failed to effectively solve his/her problems. Likewise, Christensen and Magoon (1974), Rust and Davie (1961) and Snyder et al. (1972) have reported that friends, close relatives and faculty advisers, respectively, were preferred help for personal-social problems.

The UCT-SHS-MHS is not the only on-campus facility/department capable of delivering a basic counselling and advice-giving service to students in need of support and assistance. The first level of contact for students affected by academic problems leading to academic-related stress should be consultation with relevant lecturers and tutors or, if the student is reticent to directly approach them or no satisfaction has been derived from the initial approach, the designated departmental student advisor, where appropriate explanations, suggestions and/or reassurance can be given. Each faculty has a faculty officer whose duty it is to assist students with issues concerning the interpretation of University rules and regulations (together with additional and/or specific faculty rules and regulations) so that academic-related concerns falling outside the sphere of individual lecturers and tutors can be addressed and resolved before they develop into major stress-inducing situations. The first level of contact for students affected by non-academic problems should be consultation with student advisors located at the UCT-SADC (Student Advice and Development Centre) where appropriate assistance and/or reassurance can be given. Often students are referred from there to other on-campus facilities (including the UCT-SHS-MHS) or, occasionally, to other agencies outside the University for more specialised intervention. The next level of contact for students with academic and non-academic problems, once they have utilised the abovementioned facilities, would be the UCT-SHS-MHS and its resident therapists.

3.2.9.5 Differences and similarities

Sharp and Marra (1971) report that studies dealing with the differences and similarities between clients and non-clients at collegiate and university settings are characterised by the range of findings and variety of variables studied, viz. McKinney's (1945) review indicates that early investigators dealt with variables such as age, class standing, faculty and ability while Apostal's (1968) review suggests that more recent studies have dealt with variables such as personality characteristics, interests and attitudes. Therefore, the early investigators' research is more compatible with that of objective 2 (±3) of the UCT-SHS study. However, as this research was conducted more than fifty years ago, it has little direct relevance to this study as social mores have changed significantly in the intervening period.

Tinsley and Harris (1978) and Tinsley and Benton (1980) have raised the possibility that potential clients who do not seek professional counselling may have lower expectations of being helped in counselling than those who do seek counselling while Form (1953) suggests that the non-users have a negative attitude to the mental health service. On the other hand, Snyder, Hill and Derksen (1972) report that students did not seek counselling because they had a minimal amount of information about the mental health service.

Rust and Davie (1961) suggested that non-users probably felt that: (i) their problems were not appropriate or important enough to discuss with a therapist; (ii) the sessions might not be kept confidential, or (iii) persons would be uncomfortable in the therapeutic situation while Hoover (1967) reported that students who did not seek counselling for educational problems felt it was better to solve their own problems – although some evidence indicated that keeping problems to oneself led to more problems. Furthermore, Horenstein (1976) suggests that when considering the differences between students who seek counselling and those who do not, it may be that the actual emotional problems of mental health services attendees are substantially different than those manifested by students who do not seek professional services.

A further four of the studies conducted at tertiary educational institutions situated within a developed (first world) country (USA) are reported here – one of them at Harvard University (King, 1968), the second at the University of Wisconsin (Linn, 1968), the third at the University of Pennsylvania (Reinhold, 1973) and the last at the Massachusetts Institute of Technology (MIT) (Snyder and Kahne, 1966). The students attending these colleges/universities would probably be exposed to very few of the stressors and cultural factors affecting many students registered at UCT during the study period. These results, in the absence of any local equivalent, are important as they detail characteristics of the minority of students who actually attend the mental health service – albeit the subjects of these studies derive from a highly developed country with a somewhat different set of challenges affecting their students. This information, along with that previously outlined in student needs assessments, is important to the understanding of problems associated with student adjustment to college/university and the pathogenesis of mental disorders and, in this case, which students seek evaluation and/or therapeutic intervention.

King (1968), in a study of students attending the University Health Services of Harvard University with psychiatric illness, during a 4 year period from 1961 to 1965 covering the undergraduate years of all students entering the University in the 1961/62 academic year, reports that attendees who sought either psychiatric or counselling help from the University Health Services were significantly differentiated from non-attendees with respect to only 3 social demographic variables: (i) religious preference of the student (students expressing preference for a religious affiliation other than the common groups/denominations or no stated preference were most likely to seek psychiatric assistance); (ii) the number of close friends (the tendency was for students who stated they had none to be more likely to seek psychiatric assistance than those who had many friends), and (iii) the student's evaluation of his/her past health (students who rated their past health as only fair or good were more likely to seek psychiatric assistance than those who rated it excellent). The author notes that not only was the psychiatric patient more likely to report that his/her health was less than excellent, but he/she also used the medical and surgical clinics more frequently during his/her college/university years. (This finding is confirmed by Kelvin et al., 1965, at University College, London, and Reinhold, 1973, at the University of Pennsylvania.) Therefore, there appears to be a positive association between psychological and physical disorder insofar as it may be indicative of the general health preoccupation in many neurotic and psychotic disorders. There is also the implication that many students who seek psychiatric help may already have been seen in the medical or surgical clinics, and some signs of their psychic distress may have been evident at that time. This observation has obvious relevance to the UCT-SHS insofar as medical and nursing staff should always enquire about the presence of an underlying mental disorder in any student repeatedly presenting there with a variety of physical complaints. This would facilitate early therapeutic intervention thereby saving the student prolonged and unnecessary psychological distress.

King (1965) also notes that the interpretation that might be drawn from the numerous personality tests that comprise the battery used for the Harvard Student Study (including the Myers Briggs Test which provides data which can be interpreted as measures of cognitive style, particularly of the kind of perceptual process by which a person interprets sense impressions) is that students who attended the psychiatric service were: (i) less willing to be conformists in social situations; (ii) less willing to be deferent in their relationships with others, and (iii) felt a stronger pressure to give vent to their impulses in overt behaviour. These cognitive-based findings suggest that mental health service attendees are often intolerant and impulsive individuals who would find it difficult to meet the complex demands of college/university life. These students might find it difficult to display the academic selectivity required to achieve success in their studies and lack the social skills required to integrate successfully with their peers in the broader student community. This combination of factors would predispose most of these students to severe adjustment disorders which, if left unresolved, could, at best, lead to a total lack of enjoyment of the university experience or, at worst, academic failure. Therefore it is imperative that such students receive appropriate evaluation and/or therapeutic intervention before their functional impairment becomes too severe.

Linn (1968), in a study of students attending the psychiatric outpatient service at the University of Wisconsin, during an unspecified 6 month study period, reports that attendees of the psychiatric outpatient service were significantly differentiated from non-attendees with respect to: (i) they were more likely to identify with others whom they saw as having social and emotional problems, and (ii) they would engage more frequently in discussion about such problems with them. The author notes that the college/university student's decision to seek psychiatric treatment is also strongly influenced by the kinds of interest and activities in which he/she is engaged and by the characteristics of the people with whom he/she shares them. Therefore, it is doubtful that there is any single factor which will differentiate in any meaningful way all those who seek psychiatric care from those who do not. On the other hand, Segal, Walsh and Weiss (1966) report that socially isolated students (with few sources of support and few bases for self-esteem) when confronted with stressful situations are less likely to depend on their own resources or those of the group for dealing with them and thus seek professional attention. Both sides of this argument could be relevant to the UCT-SHS-MHS. On the one hand, a user-friendly service characterised by successful intervention with one patient could lead to further attendances from other students suffering from similar problems who might, otherwise, have been reticent to present at the mental health service. On the other hand, the socially isolated student presents a unique challenge to the UCT-SHS-MHS insofar as this individual would not, in all likelihood, interact sufficiently with his/her peers to receive this first-hand endorsement of the mental health service which would encourage attendance. Therefore, a few strategically placed information sheets outlining the benefits of UCT-SHS-MHS attendance should be able to replace this peer review network where it is absent.

Reinhold (1973), in a study of students attending either the University Counseling Service (UCS) – which offered help with academic, vocational, social, personal, emotional and family problems – or the Student Health Service Psychiatric Clinic (SHSPC) – which provided psychiatric evaluation and short-term psychotherapy for personal and interpersonal adjustment problems as well as for the more classical psychiatric disorders – at the University of Pennsylvania, during a four-year study period from 1964 to 1968 covering the undergraduate years of all students entering the University in the 1964/65 academic year, report that the attendees of both the University Counseling Service and the Student Health Service Psychiatric Clinic were significantly differentiated from non-attendees with respect to: (i) extent of self-concern (significantly more users acknowledged having a greater number of high concerns than did non-users – especially female students); (ii) utilisation of the Student Health Service Medical Service; (iii) degree to which they considered obtaining psychological help, and (iv) how important they felt it was that the University provide psychological services. However, attendees did not differ significantly from non-attendees with respect to frequencies for: (i) proximity to home, and (ii) number of other formal and informal sources of help used. The author notes that attendees of the formal University-based mental health services tended to acknowledge a significantly greater number of concerns than did non-attendees. This could be due to counselling and therapy users being more willing to acknowledge the difficulties they had than were non-users, and that this very willingness made it more likely they would become attendees, whereas non-attendees may have had more difficulties which had been either consciously or unconsciously

denied. This commentary about the number of student concerns links this subheading with that previously outlining student needs assessments. In that subheading the nature and extent of individual student concerns were detailed. Therefore, regular student needs assessments (in addition to that of Flisher, 1978) should be performed at UCT and the students who register a large number of individual concerns should be encouraged to attend the UCT-SHS-MHS in order to discuss these issues and, if deemed necessary, receive further evaluation and/or therapeutic intervention. Students who deny the presence of actual problems would present a different challenge to the University insofar as they should be regularly challenged by further assessment to re-evaluate their stance and seek the necessary assistance.

Snyder and Kahne (1969), in a study of the majority of freshmen/freshers attending the Psychiatric Service at the Massachusetts Institute of Technology (MIT), during a one year study period, report that attendees were differentiated from non-attendees (according to the Omnibus Personality Inventory – OPI) as: (i) more conscious of their anxieties at the time of admission to MIT; (ii) appreciative of a broad range of intellectual interests; (iii) tolerant of ambiguity; (iv) autonomous, and (v) relatively lacking of stereotypical responses. Indeed, the authors suggest, these students' consciousness of anxiety may be related to their receptivity to stimuli, to dissonance and to risk-taking. Furthermore, the authors report that the definition, by the individual student, of a problem as relevant for psychiatric consultation was related to shared notions in the living group about the "causes" of such experiences as anxiety or depression and about the appropriateness of discussion and introspection (viz. psychotherapy) for the solution of such problems. These personality-based findings suggest that often the attendee of the mental health service is, in fact, a fairly well-adjusted student who is in touch with his/her emotions. Although these students perceive themselves to be in need of help and often, indeed, could benefit from brief psychotherapy, they probably do not represent the subgroup of students who are in greatest need of assistance for various mental disorders. It would, therefore, seem that sometimes the wrong students are attending the UCT-SHS-MHS while those in true need are still struggling with the effects of mental illness in the broader student community. Increased case finding to identify these non-users should be undertaken without compromising existing clientele.

3.2.10 Concluding comments

> *College psychiatry has been focused as much upon the treatment of the community as upon those few individuals who have developed psychiatric problems. As early and vocal proponents of the possibility of primary prevention, college psychiatrists have had continuing interest in the relation between the individual patient and the collective patient, particularly those factors in the latter which have relevance to the production of distress and disease in the former ...*

> *Initially the focus was on the dissemination of general mental hygiene principles and attitudes. In all these discussions it was assumed that the university community had some effect not only upon the intellectual development of the individuals but also upon his emotional growth and maturation. It was felt that this influence could be modified toward a more healthy development ...*
>
> (Reifler, Liptzin and Fox, 1967: p. 662)

This statement embodies the envisaged role of the student mental health service in a developed (first world) country (USA). Due to financial restraints leading to inadequate staff ratios, the UCT-SHS-MHS has not been able to adequately fulfil this primary preventive mandate. The comments concerning the interaction between the student and the college/university not only confirms the material previously covered in the initial section of this chapter but also specifically links it to the role of the mental health service.

It is important that all students suffering from mental disorders, including adjustment disorders and resultant stress reactions should feel sufficiently confident to approach the UCT-SHS-MHS for psychotherapeutic evaluation and possible intervention. In addition, friends of students presenting with symptoms of mental illness associated with denial of any problem should also feel sufficiently confident to approach the UCT-SHS-MHS on their friend's behalf. These processes will be facilitated by establishing a formal programme to promote awareness of the importance of mental health and the recognition of symptoms of mental disorders. Student usage is potentially enhanced as the UCT-SHS-MHS is situated in a relatively inconspicuous place (Protem complex on lower campus) away from the main (upper) campus but is still easily accessible to most students, being in close proximity to most of the on-campus residences. Further measures that the UCT-SHS-MHS could adopt to prevent intellectually capable students from leaving the University would include liaising with relevant academic authorities (including lecturers, heads of department and deans) and forwarding, with the patient's consent, detailed medical reports to these authorities outlining the nature of the patient's problems, his/her prognosis of recovery and recommendations concerning strategies to enhance the patient's academic performance.

3.3 OVERALL STUDENT ATTENDEES AND SELECTED VARIABLES

This section of the Literature Review is divided into seven subsections. The first subsection outlines the diagnosis of student mental illness. The second subsection details overall student attendees, the third subsection selected demographic (gender, race/population group, race/population group and gender combined, age and language) variables, the fourth subsection selected academic (faculty, level of study and year of study) variables, the fifth and sixth subsections residential (home address) and financial assistance variables, respectively. The seventh subsection provides a summary profile of the college/university mental health service attendee. Each subsection, except the summary (viz. overall student attendees and each of the

selected variables) tabulates and briefly discusses individual studies of mental health facilities serving tertiary educational institutions (predominantly American colleges and universities) reported in the literature or forwarded on request from Southern African universities or technikons according to attendee details (Objective 1 data), usage/utilisation rates per 1 000 students (Objective 3 data) and mean number of consultations per patient (where available) (Objective 4 data). This objective-specific data is further subdivided into patient-specific and clinical/diagnostic-specific formats for overall student attendees together with gender and race/population group-specific variables. The latter describes patients attending college/university mental health services in terms of either psychiatric diagnoses and/or presenting complaints. It is noteworthy that, for Objective 3-specific data, the articles quoted in the Literature Review (unlike the UCT-SHS study results appearing in Chapter 5) document a series of usage/utilisation rates per 1 000 students for college/university mental health service attendance without including corresponding odds ratios (ORs) for patients (attendees) versus the total student community. This review only includes studies appearing in the literature after the mid-1950s as it was felt that conditions affecting students prior to this period were significantly different to those affecting students in the 1990s. South Africa is currently undergoing a profound social transformation process initiated in the early 1990s that is similar to that which affected the USA in the mid-1960s so that the bulk of the studies reported here from the 1960s and 1970s are still highly relevant to the social milieu pertaining to the UCT-SHS mental disorders study.

The tables included in this section are not only divided according to overall student attendees and these selected variables employed in the UCT-SHS study but are further subdivided according to the venue (country) of the tertiary educational institution mental health facility under investigation, viz. developed (first world) countries of which the USA is the predominant source of material, developing (third world) countries which include certain Asian and African countries, and Southern African countries which include local institutions. This classification has been adopted as there is generally an enormous difference between social, cultural and socio-economic characteristics pertaining to developed and developing countries while South(ern) Africa is often considered as displaying a combination of first world and third world conditions. Historically disadvantaged Black students tend to be raised in distinctly third world conditions while their generally advantaged non-Black peers tend to derive from distinctly first world conditions. The tables included in this section document 61 samples reported in 43 articles for developed countries, 6 samples reported in 4 articles for developing countries and 19 samples from 5 universities in Southern Africa. Therefore, 61 of the 86 samples (71 per cent) are derived from developed countries which have the human and financial resources to undertake such research. This figure would have approximated 80 per cent if earlier (pre mid-1950s) studies were included in this review together with a few literature sources that were not readily available to the author.

The candidate has purposely adopted a structural layout for this subsection of the Literature Review (whose structure largely resembles that of section 5.1 of the Results chapter and section 6.2 of the Discussion chapter) that will permit maximum inter- and intra-variable comparison. The latter includes both venue (country)-specific (developed, developing and Southern African countries) and objective-specific (attendees, usage/utilisation rates and number of consultations) data relating to the tertiary educational institution mental health facility under investigation. In order to achieve such a goal, it was felt that a standardised structural layout would have to be maintained throughout the entire subsection – especially the subsection/subheadings detailing overall student attendees, gender and race/population group which also document additional detailed clinical/diagnostic-specific data. The candidate is well aware that such a systematic approach to the review of the available variable-specific literature may potentially hold certain disadvantages. However, it is felt that the benefits to be gained from this strategy of adhering to a preconceived structural layout clearly outweigh the above negative considerations.

3.3.1 Diagnosis of Student Mental Illness

According to the DSM IV (Diagnostic and Statistical Manual of mental disorders: Fourth Edition) a mental disorder is defined as:

> *... a clinically significant behavioral or psychological syndrome or pattern that occurs in an individual and that is associated with present distress (e.g., a painful symptom) or disability (i.e., impairment in one or more important areas of functioning) or with a significantly increased risk of suffering death, pain, sisability, or an important loss of freedom. In addition, this syndrome or pattern must not be merely an expectable and culturally sanctioned response to a particular event, for example, the death of a loved one. Whatever its original cause, it must currently be considered a manifestation of a behavioral, psychological, or biological dysfunction in the individual.*
>
> (American Psychiatric Association (APA), 1994; p. xxi - xxii)

Hersch, Nazario and Backus (1983) state that all post DSM II definitions (as represented by the most recent definition above) have, compared to earlier definitions, increased the emphasis on behavioural and psychological factors in an interactional system. The authors regard this change as a key step in developing further a common language that will increase the linkage between mental health professionals in psychiatry, psychology and social work as well as providing a new framework to view mental health problems.

Despite (or because of) such diagnoses of psychiatric illness and associated diagnostic classifications, Winer and Dorus (1972) comment that there is hardly a topic which receives more discussion among student mental health workers than the difficulties encountered in categorising the psychological complaints of the college/university-age population. Consequently incidence and prevalence studies, studies of changes in

student-patients over time and comparisons of student-patient groups are all hampered by the inability to organise information in a way conducive to both clinical and research needs. What is needed, the authors state, is a method for describing the problems of this group that allows for the special nature of this population and, yet, is objective and reproducible. Likewise, Deutsch and Ellenberg (1973) observe that the pathologic picture of college/university students can be quite fluid, making for difficulties in evaluation, particularly when the student is seen over a relatively brief span of time as occurs in many mental health services. Likewise, Kysar (1964) reports that students are more often seen at mental health services in the early phases of emotional disturbances before the psychopathology is organised into the usual psychiatric syndromes.

Selzer (1960) suggests that students at college/university mental health services are often underdiagnosed. This can be attributed to a number of possible causes: (i) the necessity of the busy therapist to concentrate on the immediate or precipitating complaint may have the effect of obscuring the presence of underlying pathology, (ii) the patient's youth, intellectual ability, and academic prowess which may make it difficult to accept the idea that members of this group are emotionally ill, and (iii) the carefully nurtured "myth" about campus life and its inhabitants that portray campus life as a series of parties and games attended by the carefree, irresponsible student body.

3.3.1.1 Diagnostic systems

Smith et al. (1963) state that a descriptive diagnostic classification system should strive to meet several criteria: (i) it should be operational, communicable or reproducible; (ii) it should be semiquantitative, i.e. give some indication of the degree of disorder; (iii) it should maintain the same level of abstraction throughout; (iv) it should be composed of mutually exclusive categories; (v) it should comprehensively cover the range of psychiatric phenomena, and (vi) it should be set in a widely accepted theoretical framework. Indeed, Hersch, Nazario and Backus (1983) state that such a formal psychiatric diagnostic system provides several real advantages which include: (i) the development of a system to increase communication among professionals; (ii) provide guidelines for treatment and the delivery of clinical services and (iii) systematic scientific investigation. In this vein, Fox and Reifler (1967) note that differences of criteria used by different investigators make it difficult to compare data relating to diagnostic categories.

Maclay (1967), employing a functional rather than a descriptive diagnostic classification, divides students referred to the psychiatrist at Birmingham University into two broad groups: (i) severe cases (29,4 per cent of referrals) comprised students who, by virtue of their mental state, were severely disabled and unable to function satisfactorily in the University because of it – 20,9 per cent of this group withdrew from the university, and (ii) mild or moderate cases (67,8 per cent of referrals) comprised students who had psychiatric problems and found life difficult because of them, but who nevertheless managed to maintain a reasonable adjustment to university life – only 1,0 per cent of this group withdrew from the university (2,8 per cent of referrals were considered to be normal psychiatrically.)

3.3.2 Overall Student Attendees

In the literature review appearing in this chapter, there are 61 samples reported in 43 articles from developed (first world) countries, six samples recorded in four articles from developing (third world) countries and 19 samples obtained from five Southern African universities. This subsection precedes others detailing the individual selected demographic, academic, residential (home address) and financial assistance variables investigated in this research work. It functions to document the overall number of attendees (Objective 1), the overall usage/utilisation rate per 1 000 students (Objective 3) and overall mean number of consultations per student (Objective 4) for the individual samples recorded in Table 3.1. These overall findings can be compared to the corresponding figures (where available) appearing in the separate tables included in the subheadings detailing the individual exposure-orientated variables.

This subsection also functions to review the relative frequency (importance) of individual clinical diagnoses (both psychiatric diagnoses and presenting complaints format) for the individual student attending the college/university mental health service (refer to Table 3.2). The internationally recognised descriptive diagnostic classification system employed by the author to code individual presenting psychiatric diagnoses will be detailed (where available) in Table 3.2 in square brackets in the classification column. These overall findings are substantially reorganised by grouping identical clinical diagnoses (in the form of major diagnostic categories such as affective disorders, adjustment disorders, V-codes, anxiety (neurotic) disorders and other disorders including several separately coded disorders) to provide the material appearing under the individual subheadings.

Table 3.1 Number of attendees, usage/utilisation rate per 1 000 students and number of consultations per patient for students attending college/university mental health facilities.

Reference	Location	N	Details of sample	Usage/utilisation rate per 1 000 students	Number of consultations per student
(a) Developed (first world) countries					
Allen and Janowitz (1964)	University of Massachusetts, USA	N/S	Student attendees from 09/61 to 06/62	53,0	N/S
		N/S	Student attendees from 09/62 to 06/63	58,0	N/S
		N/S	Student attendees from 09/63 to 06/64	78,0	N/S
Alston (1974)	New York University, USA	68	Student attendees from 09/69 to 06/70	N/S	Mean: 2,20[1]
Boor (1975)	Fort Hays Kansas State College, USA	84[2]	Student attendees from 09/70 to 01/74	N/S	N/S
Braaten and Dorling (1961)	Cornell University, USA	639	Student attendees from 07/59 to 06/60	N/S	N/S
Buckle (1972)	Monash University, Australia	130	Student attendees over unspecified 3 year period	N/S	N/S

Reference	Location	N	Details of sample	Usage/utilisation rate per 1 000 students	Number of consultations per student
Carmen et al. (1968)	Harvard University, USA	106	Undergraduate student athlete attendees from 09/57 to 06/62	14,0	Distribution: ≤5: 70 (66,0%) 6-10: 15 (14,0%) ≥10: 21 (20,0%)
		N/S	Undergraduate student non-athlete attendees from 09/57 to 06/62	17,0	N/S
Craig (1974)	Anonymous Arts College in Baltimore, USA	44	Undergraduate student attendees from 09/70 to 06/71	43,1	N/S
Dann (1964)	University College, Swansea, UK	21	Undergraduate psychology student attendees entering College in 1958/59 and 60	N/S	N/S
		172	Undergraduate non-psychology student attendees entering College in 1958/59 and 60	N/S	N/S
		193	Undergraduate student attendees entering College in 1958/59 and 60	N/S	N/S
Deutsch and Ellenberg (1973)	New York University's Washington Square Campus, USA	64	Freshman (fresher) student attendees from 09/65 to 06/66	83,9	N/S
Dunn et al. (1980)	College Mental Health Center, Boston, USA	814[3]	Student attendees from 09/75 to 06/77	12,4	Mean: 8,10
Farnsworth (1965)	Harvard University, USA	UNK	Student attendees from 09/63 to 06/64	76,0	N/S
Fox and Reifler (1967)	University of North Carolina at Chapel Hill, USA	125	Student attendees from 06/56 to 05/57	18,0	N/S
		466	Student attendees from 06/64 to 05/65	41,0	N/S
		2 075	Student attendees from 06/56 to 05/64	N/S	Distribution: 1: 1 017 (49,0%) 2: 539 (26,0%) 3: 208 (10,0%) 4: 104 (5,0%) 5: 83 (4,0%) ≥6: 124 (6,0%)
Frank and Kirk (1976)	University of California, Berkeley, USA	720	Undergraduate student attendees at the Campus Counseling Center entering University in 1966[4]	50,8	Distribution: 1: 202 (28,1%) 2: 213 (29,6%) 3: 110 (15,3%) 4-5: 81 (11,3%) ≥6: 104 (15,8%)
		349	Undergraduate student attendees at the Psychiatric Service of the SHS entering University in 1966[5]	22,8	Distribution: 1: 100 (28,7%) 2: 65 (18,6%) 3: 36 (10,3%) 4-5: 44 (12,6%) ≥6: 104 (29,8%)
		934	Undergraduate student attendees at either the Campus Counseling Center or Psychiatric Service of the SHS entering University in 1966	65,0[6]	N/S

Reference	Location	N	Details of sample	Usage/utilisation rate per 1 000 students	Number of consultations per student
Friedman and Coons (1969)	Indiana University, USA	647	Student attendees from 09/66 to 06/67	N/S	Mean: 2,80
Gibbs (1975)	Stanford University, USA	3 604	Student attendees at Cowell Health Center from 09/69 to 06/72	N/S	Mean: 4,29
Hersch and Lathan (1985)	University of Massachusetts at Amherst, USA	100	Student attendees from 09/78 to 06/83	N/S	Mean: 1978/79: 5,50[7] 1982/83: 4,50[7] Distribution (1983): 1: N/S (32,0%) 2: N/S (16,0%) 3: N/S (10,0%) ≥4: N/S (42,0%)
Hersch et al. (1983)	University of Massachusetts at Amherst, USA	200	Student attendees from 10/80 to 05/81	N/S	N/S
Horenstein (1976)	University of Kansas, USA	122	Student attendees from 12/70 to 05/72	N/S	N/S
Jenkins et al. (1986)	Anonymous large midwestern university, USA	414[8]	Student attendees from 09/81 to 06/82	N/S	Mean: 2,20 Range: 1-21 Distribution: 1-2: 222 (53,6%) ≥3: 192 (46,4%)
Jones (1972)	University of Melbourne, Australia	250	Student attendees from 01/66 to 12/71	N/S	N/S
Kaila (1958)	Helsinki University, Finland	164	Student attendees from 09/52 to 06/55	4,2	Mean: 4,00 Distribution: ≤3: 82 (50,0%) 4-9: 62 (38,0%) ≥10: 20 (12,0%)
Kidd and Caldbeck-Meenan (1966)	University of Edinburgh, UK	172	Student attendees at all psychiatric services at the University, hospitals and private sector of Edinburgh and S-E Scotland during an unspecified one year period	110,6	N/S
	Queen's University of Belfast, UK	100	Student attendees at all psychiatric services at the University, hospitals and private sector of Belfast and N Ireland during an unspecified one year period	102,6	N/S
Maclay (1967)	Birmingham University, UK	146	Student attendees from 01/64 to 12/65	N/S	N/S
Miller (1963)	Columbia College, USA	UNK	Student attendees from 09/62 to 06/63	127,0	N/S
Nixon (1959)	Vassar College, USA	UNK	Student attendees from 09/51 to 06/59	86,0	N/S
Paulsen (1964)	Stanford University, USA	UNK	Student attendees from 01 to 12/63	150,0	N/S
Pearlman (1958)	Brooklyn College, USA	UNK	Student attendees from 09/56 to 06/57	35,0	N/S
Reifler et al. (1967)	University of North Carolina at Chapel Hill, USA	125	Student attendees from 06/56 to 05/57	N/S	N/S
		550	Student attendees from 06/65 to 05/66	N/S	N/S

Reference	Location	N	Details of sample	Usage/utilisation rate per 1 000 students	Number of consultations per student
Reinhold (1973)	University of Pennsylvania, USA	171	Undergraduate student attendees at the University Counseling Service entering University in 1964[9]	33,2	N/S
		116	Undergraduate student attendees at the SHS Psychiatric Clinic entering University in 1964[9]	22,5	N/S
		252	Undergraduate student attendees at either the University Counseling Service or SHS Psychiatric Clinic entering University in 1964[9]	48,8	N/S
Rosecan et al. (1992)	Georgetown University, USA	48[10]	Undergradunte student admissions to inpatient psychiatric unit from 01/87 to 12/89	2,9[11]	N/S
Schwarz (1964)	University of British Columbia, Canada	206	Student attendees from 09/62 to 05/63	15,0	Mean: 7,8 Distribution 1: 39 (18,9%) ≤5 125 (60,7%) ≤15 176 (85,4%)
Schwarz (1967)	49 Canadian campuses	N/S	Student attendees from 09/62 to 05/63	29,0 Range: 14,0-103,0	N/S
Selzer (1960)	University of Michigan, USA	506	Student attendees from 07/56 to 06/58	1956/57: 84,0 1957/58: 83,2	Mean: 4,4 Distribution: 1: 192 (37,9%) 2-4: 187 (37,0%) 5-9: 76 (15,0%) >9: 51 (10,1%)
Sharp and Marra (1971)	University of Wyoming, USA	594	Student attendees from 07/67 to 06/68	N/S	N/S
Stangler and Printz (1980)	University of Washington, USA	500	Student attendees over unspecified 5 month period	32,0	N/S
U'ren et al. (1973)	US Military Academy at Westpoint, USA	119	Cadet attendees from 07/70 to 06/71	31,8	Mean: 3,6
Walters (1970)	University of Illinois, USA	4 547	Student attendees from 09/58 to 06/68	21,8 Range: 7,9-29,0	Mean: 4,8
Whittington (1964)	Kansas State University, USA	UNK	Student attendees from 09/59 to 06/60	36,0	N/S
Winer and Dorus (1972)	University of Chicago, USA	273	First, fourth and fifth year undergraduate student attendees from 09/68 to 06/70	1968/69: 60,4 1969/70: 61,7	Distribution: ≤5: 205 (75,1%) ≤10: 246 (90,1%)
Wogan and Amdur (1974)	University of Connecticut, USA	188[12]	Student attendees from 09/64 to 06/65	36,0[13]	N/S
		200[14]	Student attendees from 09/71 to 06/72	90,0[15]	N/S

Reference	Location	N	Details of sample	Usage/utilisation rate per 1 000 students	Number of consultations per student
		237	Student attendees from 09/70 to 06/71	N/S	Distribution: 1: 101 (42,6%) 2: 35 (14,8%) ≤4: 178 (75,1%) ≤8: 212 (89,5%)
(b) Developing (third world) countries					
Cox and Muhangi (1975)	Makerere University, Uganda	47	Student attendees from 08-12/70	17,3	N/S
		70	Student attendees from 08-12/72	19,6	N/S
		111	Student attendees from 08-12/73	31,1	N/S
German and Arya (1969)	Makerere University College, Uganda	121	Student attendees from 10/66 to 06/67	89,6	N/S
Ovuga et al. (1976)	Makerere University , Uganda	2416	Undergraduate student attendees entering University in 1992	12,9[17]	N/S
Wig et al. (1971)	Panjab University, India	68	Student attendees from 09/66 to 06/67	N/S	Mean: 3,3 Distribution: 1: 8 (11,8%) 2: 22 (32,4%) 3: 13 (19,1%) 4-7: 21 (30,9%) ≥8: 4 (5,9%)
(c) Southern African countries					
Germond (1997)	Medical University of Southern Africa (MEDUNSA)	143[18]	Student consultations (rather than attendees) from 01-12/96	N/S	N/S
Mlotha (1997)	Vista University – Bloemfontein campus	421	Student attendees from 01-12/96	N/S	N/S
	Vista University – East Rand campus	1 651	Student attendees from 01-12/96	N/S	N/S
	Vista University – Mamelodi campus	2 189	Student attendees from 01-12/96	N/S	N/S
	Vista University – Port Elizabeth campus	819	Student attendees from 01-12/96	N/S	N/S
	Vista University – Sebokeng campus	939	Student attendees from 01-12/96	N/S	N/S
	Vista University – Soweto campus	7 609	Student attendees from 01-12/96	N/S	N/S
	Vista University – Welkom campus	3 302	Student attendees from 01-12/96	N/S	N/S
	Vista University – Bloemfontein campus	4 561	Student attendees from 01/94-12/96	N/S	N/S
	Vista University – East Rand campus	4 645	Student attendees from 01/94-12/96	N/S	N/S
	Vista University – Mamelodi campus	6 224	Student attendees from 01/94-12/96	N/S	N/S
	Vista University – Port Elizabeth campus	1 144	Student attendees from 07-10/95 and 01-12/96[19]	N/S	N/S
	Vista University – Sebokeng campus	4 558	Student attendees from 01/94-12/96	N/S	N/S

Reference	Location	N	Details of sample	Usage/utilisation rate per 1 000 students	Number of consultations per student
	Vista University – Soweto campus	19 924	Student attendees from 01/94-12/96	N/S	N/S
	Vista University – Welkom campus	3 930	Student attendees from 01-12/94 and 01-12/96[19]	N/S	N/S
Mupunga (1997)	University of Zimbabwe	473	Student attendees from 01-12/96	47,0[20]	N/S
Naidoo (1997)	University of the Western Cape	1 004[21]	Student attendees from 01-12/95	83,5[22]	N/S
		722[23]	Student attendees from 01-12/96	94,7[24]	N/S
Venter (1997)	University of the Free State	2 576	Student attendees from 01-12/96	286,2	N/S

Footnotes

1. The Mental Health Section at New York University operated essentially as a consultation and referral service, with the vast majority of patients being seen for one to three consultations. For many of the students two or three consultations sufficed to enable them to gain a perspective on an emotional upset or to stiffen defences. If, in the therapist's judgement, the problem warranted more extensive attention or therapy, the students were appropriately referred, mostly to low-cost clinics in the metropolitan area. Referral for treatment could not always be made even when deemed beneficial or necessary by the therapist because of the client's finances or motivation.

2. The figures quoted above represent a randomly selected sample of 84 cases from the entire caseload (exact number of cases are not mentioned in the article) of the Psychological Service Center during the 3+ year study period.

3. The entire case load of the College Mental Health Center for 1975 to 1977 was 847 cases but the authors excluded 33 cases due to various clerical reasons to leave a sample of 814 cases for which nearly complete data were available.

4. The Campus Counseling Center focused on clinical vocational-educational counselling, i.e. assisting students to arrive at realistic and potentially satisfying educational and vocational objectives as well as facilitating their personal growth from a developmental frame of reference.

5. The Psychiatric Service had a therapy orientation and focused on assisting students with self-designated personal problems on a relatively short-term basis.

6. The usage/utilisation rate quoted above for attendees of either the Campus Counseling Center or the Psychiatric Service of the Student Health Service is obtained by removing students who used BOTH the above mental health facilities. The authors note that nearly 40 per cent (37,3 per cent) of the study sample of undergraduate students entering the University in the 1966/67 academic year, used both the Psychiatric Service and the Counseling Center – consequently 40 per cent of Psychiatric Service attendees have been excluded from the combined usage/utilisation rate quoted.

7. The University of Massachusetts at Amherst introduced a mental health walk-in-clinic in 1978 to cater for an increase in the use of emergency services causing the decrease in the average number of consultations per patients as a way of managing so many more patients. The authors note that the clinical services offered at the Mental Health Service were shifting from a short-term therapy orientation to crisis therapy.

8. The entire case load of the counselling centre for 1981/82 was 469 cases but the authors excluded 55 cases because of extraneous factors which affected the duration of counselling (viz. number of interviews/consultations) – which is the primary focus of the article to leave a sample of 414 cases.

9. The author notes that the population defined and sample strata studied were initially controlled for concurrent and uninterrupted membership of the University of Pennsylvania. Those individuals who, for whatever reasons, were temporarily or permanently separated from the University were not represented. This restriction of the population studied may have resulted in a conservative estimate (underrepresentation) of the utilisation of this university mental health service.

10. Although there were 48 separate admissions of Georgetown University students to the mental healthcare unit during the 3 year study period, one student was admitted twice in 1989 and another was admitted twice, once in 1987 and again in 1989. Therefore, the remaining 44 admissions correspond with individual students hospitalised one time at Georgetown University Hospital. The original figure of 48 admissions has been employed here in the absence of modified figures.

11. As this usage/utilisation rate records the number of students requiring inpatient psychiatric care, it is not directly comparable to other usage/utilisation rates recorded for outpatient facilities.

12. The entire case load of the Student Mental Health Service for 1964/65 was 368 cases but the authors excluded 180 cases which, inter alia, had been seen in previous years or were administrative referrals to leave a sample of 188 cases.

13. The quoted usage/utilisation rate of 36,0 attendees per 1 000 students in the 1964/65 academic year relates to a total of 368 clinic users.

14. The entire case load of the Student Mental Health Service for 1971/72 was 1 052 cases but the authors employed a stratified sample of 200 cases divided proportionately by the month in which the patient applied to the clinic for the first time.

15. The quoted usage/utilisation rate of 90,0 attendees per 1 000 students in the 1971/72 academic year relates to a total of 1 052 clinic users.

16. The attendance figures quoted above are derived from a sample of 619 (ex a total of 2 140) newly enrolled students who voluntarily completed a self-administered questionnaire (the Umzimkulu Suicide Proneness Inventory – USPI) during the first two weeks of their admission to the University. A total of 50 students attended counselling services at the University Hospital at Makerere University, during the 3 year study period.

17. The total of 50 students attending counselling services at the University Hospital at Makerere University, during the 3 year study period from October 1993 to June 1995, yield a usage/utilisation rate of 7,8 attendees per 1 000 students. The students who refused to complete the USPI during the first two weeks of their admission to the University yielded a usage/utilisation rate of 5,7 attendees per 1 000 students. The authors state that it is possible that a larger number

of students actually sought help for psychological complaints as: (i) several private walk-in clinics exist in town and many students who feel disenchanted with government health facilities use these walk-in clinics, (ii) individuals with psychological problems usually seek help from traditional healers before they turn to western-trained health care providers, and (iii) many students who registered at the University Hospital provided very little personal identification details such as registration numbers, etc., making it difficult to identify them with any degree of certainty.

18. The correspondent notes that quite a number of emotional problems presented with pain in various areas and sometimes they were recorded as "chest pain", "headache", "abdominal pain", "low back pain", or "syncope" instead of psychological aetiology of the pain or medical disorder. Therefore, the psychiatric diagnoses recorded are clearly mental or emotional categories (rather than these psychosomatic/psychophysiological conditions outlined above) and relate to the number of consultations required by patients rather than the actual number of patients, per se, seen at the Campus Health Service. This consultation-specific analysis is a departure from the patient-specific analysis employed in all the other studies reported in this section.

19. Incomplete statistics for the period of January 1994 to December 1996 have been recorded for these two Vista University campuses (Port Elizabeth and Welkom).

20. An approximate usage/utilisation rate has been recorded as the exact population of the University of Zimbabwe ("about 10 000 students") has not been provided by the correspondent.

21. The entire case load of the Centre for Student Counselling for 1955 was 1 280 cases but the correspondent excluded 276 cases due to the lack of client checklists (completed voluntarily) to leave a sample of 1 004 cases for which completed checklists were available.

22. This usage/utilisation rate has been calculated by employing 1 229 cases which constitute the entire case load of 1 280 attendees for 1995 minus the 51 school attendees from the community. (The remaining usage/utilisation rates have been calculated by employing the sample of 1 004 cases for which completed checklists were available – hence the lower gender-specific values.)

23. The entire case load of the Centre for Student Counselling for 1995 was 1 276 cases but the correspondent excluded 554 cases due to the lack of client checklists (completed voluntarily) to leave a sample of 722 cases for which completed checklists were available.

24. This usage/utilisation rate has been calculated by employing 1 252 cases which constitute the entire case load of 1 276 attendees for 1996 minus the 24 school attendees from the community. (The remaining usage/utilisation rates have been calculated by employing the sample of 722 cases for which completed checklists were available – hence the lower gender-specific values.)

Abbreviations appearing in Table 3.1:

N/S = Result not specified.

Table 3.2 Clinical diagnoses or presenting complaints for students attending college/university mental health facilities.

Reference	Location	N	Details of sample	Classification	Diagnoses/presenting complaints	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
(a) Developed (first world) countries								
Allen and Janowitz (1964)	University of Massachusetts, USA	636	Student attendees from 09/61 to 06/63	Psychiatric diagnoses	1. Adjustment reaction 2. Personality disorder 3. Neurosis 4. Psychosis 5. Other 6. No pathology	215 (33,8%) 166 (26,1%) 72 (11,3%) 41 (6,5%) 63 (9,9%) 79 (12,4%)	N/S	N/S
Braaten and Darling (1961)	Cornell University, USA	639	Student attendees from 07/59 to 06/60	Primary presenting complaints	1. Depression In rank order, the following most prevalent presenting symptoms were: 2. Psychasthenia 3. Sexual identification problems 4. Hysteria 5. Schizophrenia Other presenting symptoms were: 6. Hypochondriasis 7. Paranoia 8. Social introversion	160 (25,0%) N/S N/S	N/S	N/S
				Secondary presenting complaints	1. Psychasthenia 2. Hysteria 3. Schizophrenia 4. Psychopathic deviation 5. Hypochondriasis	N/S	N/S	N/S
				Combined primary and secondary presenting complaints	1. Depression and psychasthenia 2. Psychasthenia and depression 3. Depression and schizophrenia 4. Psychasthenia and schizophrenia 5. Psychasthenia and hysteria 6. Schizophrenia and psychasthenia 7. Depression and sexual identification problem 8. Sexual identification problems and depression	N/S	N/S	N/S
Buckle (1972)	Monash University, Australia	130	Student attendees over unspecified 3 year period	Psychiatric diagnoses	1. Depression 2. Personality disorder 3. Anxiety 4. Sexual 5. Other neuroses	35 (26,9%) 34 (26,2%) 25 (19,2%) 16 (12,3%) 7 (5,4%)	N/S	N/S

Reference	Location	N	Details of sample	Classification	Diagnoses/presenting complaints	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
Cannen et al. (1968)	Harvard University, USA	106	Undergraduate student athlete attendees from 09/57 to 06/62	Presenting complaints	1. Study problems 2. Anxiety & depression 3. Social difficulties 4. Sexual preoccupation 5. Career worries	43 (40,6%) 26 (24,5%) 13 (12,3%) 12 (11,3%) 7 (6,6%)	5,7 3,4 1,7 1,6 0,9	N/S
Craig (1974)	Anonymous Arts College in Baltimore, USA	44	Undergraduate student attendees from 09/70 to 06/71	Modified psychiatric diagnoses[1]	1. Situational disorder 2. Character disorder 3. Reactive depression 4. Schizophrenia[2] 5. Others	17 (38,6%) 9 (20,5%) 8 (18,2%) 3 (6,8%) 7 (15,9%)	16,1 8,5 7,6 2,8 6,6	N/S
Dann (1964)	University College, Swansea, UK	193	Undergraduate psychology and non-psychology student attendees entering College in 1958, 59 and 60[3]	Psychiatric diagnoses	1. Neurotic 2. Psychosomatic 3. Psychotic 4. Personality defect	94 (48,7%) 69 (35,8%) 19 (9,8%) 11 (5,7%)	N/S	N/S
Davidson and Hutt (1964)	Oxford University, UK	500	Student attendees from 09/50 to 06/61	Presenting diagnoses	1. Neurotic depressions 2. Anxiety states 3. Affective psychoses 4. Personality disorders 5. Sexual difficulties[4]	104 (20,8%) 93 (18,6%) 79 (15,8%) 67 (13,4%) 60 (12,0%)	N/S	N/S
Dunn et al. (1980)	College Mental Health Center, Boston, USA	814[5]	Student attendees from 06/56 to 05/64	Psychiatric diagnoses	1. Adjustment reaction 2. Depressive neurosis 3. Personality disorder 4. Anxiety neurosis 5. Other neuroses	253 (31,1%) 216 (26,5%) 141 (17,3%) 65 (8,0%) 41 (5,0%)	N/S	N/S
				Presenting complaints	1. Social problems (viz. shyness and self-consciousness) 2. Generalised dysfunction 3. Family problems 4. Academic problems 5. Careers and futures	309 (38,0%) 163 (20,0%) 73 (9,0%) 57 (7,0%) 41 (5,0%)	N/S	N/S
Fox and Reifler (1967)	University of North Carolina at Chapel Hill, USA	2 075	Student attendees from 06/56 to 05/64	Psychiatric diagnoses [DSM I]	1. Neurotic reaction 2. Character disorder 3. Transient situational reaction 4. Psychotic reaction 5. Other	830 (40,0%) 581 (28,0%) 291 (14,0%) 145 (7,0%) 223 (11,0%)	N/S	N/S

Reference	Location	N	Details of sample	Classification	Diagnoses/presenting complaints	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
Friedman and Coons (1969)	Indiana University, USA	647[6]	Student attendees from 09/66 to 06/67	Psychiatric diagnoses	1. Adjustment reaction 2. Passive-aggressive personality[7] 3. Schizoid personality 4. Depression 5. Anxiety	168 (26,5%) 93 (14,7%) 79 (12,5%) 30 (4,7%) 22 (3,5%)	N/S	N/S
				Presenting Complaints	1. Academic problems 2. Depression 3. Anxiety 4. Somatic and psycho-physiological symptoms 5. Heterosexual inter-personal relationship problems 6. General interpersonal relationship problems 7. Homosexuality	91 (14,4%) 89 (14,0%) 80 (12,6%) 49 (7,7%) 46 (7,3%) 44 (6,9%) 36 (5,7%)	N/S	2,5 3,3 3,6
Golinger (1991)	The Johns Hopkins University School of Medicine, USA	100	Student attendees from 09/84 to 06/88	Presenting Complaints	1. Relationship problems 2. Family problems 3. Academic problems	61 (61,0%) 47 (47,0%) 45 (45,0%)	N/S	N/S
Hersch et al. (1983)	University of Massachusetts at Amherst, USA	200	Student attendees from 10/80 to 05/81	Psychiatric diagnoses [DSM III]	1. V codes 2. Adjustment disorders 3. Other specific affective disorders 4. Substance use disorder 5. Anxiety disorders	123 (61,5%) 70 (35,0%) 9 (4,5%) 7 (3,5%) 7 (3,5%)	N/S	N/S
				Presenting complaints	1. Phase of life problem 2. Adjustment disorder with depressed mood 3. Adjustment disorder with mixed emotional features 4. Other interpersonal problem 5. Academic problem	72 (36,0%) 29 (14,5%) 27 (13,5%) 18 (9,0%) 13 (6,5%)	N/S	N/S
Horenstein (1976)	University of Kansas, USA	122	Student attendees from 12/70 to 05/72	Psychological problem area - self-rated scores[8]	1. Self and self-satisfaction 2. Future goals 3. School (university) 4. Family 5. Opposite sex inter-personal relationships 6. Financial 7. Same sex inter-personal relationships 8. Vocation (present) 9. Physical complaints 10. Drugs and alcohol	Score: 4,75 Score: 4,12 Score: 3,95 Score: 3,81 Score: 3,43 Score: 3,03 Score: 2,57 Score: 1,98 Score: 1,95 Score: 1,38	N/A	N/S

Reference	Location	N	Details of sample	Classification	Diagnoses/presenting complaints	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
Jones (1972)	University of Melbourne, Australia	250	Student attendees from 01/66 to 12/71	Psychiatric diagnoses	1. Depression	132 (52,8%)	N/S	
					2. Anxiety	48 (19,2%)		N/S
					3. Sexual problems	27 (10,8%)		
					4. Schizophrenia	13 (5,2%)		
					5. Personality disorder	7 (2,8%)		
				Presenting Complaints	1. Study	93 (27,6%)	N/S	
					2. Emotional and sexual[9]	66 (19,6%)		N/S
					3. Parental	57 (16,9%)		
					4. Interpersonal relations	52 (15,4%)		
					5. Ethnic	12 (3,6%)		
Kidd and Caldbeck-Meenan (1966)	University of Edinburgh, UK	172	Student attendees at all psychiatric services at the University, hospitals and private sector of Edinburgh and S-E Scotland during an unspecified one year period	Modified psychiatric diagnoses[10]	1. Neurosis	57 (33,1%)	36,7	N/S
					2. Psycho-physiological reactions and psychosomatic illness	45 (26,2%)	28,9	
					3. Character disorder	11 (6,4%)	7,1	
					4. Psychosis	8 (4,7%)	5,1	
					5. Other	51 (29,7%)	32,8	
		57		Neurosis sub-categories	1. Anxiety neurosis	32 (56,1%)	20,6	N/S
					2. Reactive depression	16 (28,1%)	10,3	
					3. Hysteria	5 (8,8%)	3,2	
					4. Obsessional neurosis	2 (3,5%)	1,3	
					5. Anorexia nervosa	2 (3,5%)	1,3	
	Queen's University of Belfast, UK	100	Student attendees at all psychiatric services at the University, hospitals and private sector of Belfast and N Ireland during an unspecified one year period	Modified psychiatric diagnoses[10]	1. Psycho-physiological reactions and psychosomatic illness	39 (39,0%)	40,0	N/S
					2. Neurosis	18 (18,0%)	18,5	
					3. Character disorder	7 (7,0%)	7,2	
					4. Psychosis	2 (2,0%)	2,1	
					5. Other	34 (34,0%)	34,9	
		18		Neurosis sub-categories	1. Anxiety neurosis	13 (72,2%)	13,3	N/S
					2. Reactive depression	2 (11,1%)	2,1	
					3. Hysteria	2 (11,1%)	2,1	
					4. Obsessional neurosis	1 (5,6%)	1,0	
					5. Anorexia nervosa	0 (0,0%)	0,0	

Reference	Location	N	Details of sample	Classification	Diagnoses/presenting complaints	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
Maclay (1967)	Birmingham University, UK	146	Student attendees from 01/64 to 12/65	Psychiatric diagnoses	1. Depression 2. Anxiety 3. Personality disorder 4. Examination panic 5. Sexual problems	50 (34,3%) 26 (17,8%) 20 (13,7%) 7 (4,8%) 6 (4,1%)	N/S	N/S
		43	Severe cases		1. Personality disorder 2. Depression 3. Acute anxiety state 4. Schizophrenia 5. Manic-depressive psychosis 6. Obsessional neurosis 7. Phobic anxiety state 8. Sexual deviation	14 (32,6%) 12 (27,9%) 8 (18,6%) 5 (11,6%) 2 (4,7%) 2 (4,7%) 2 (4,7%) 2 (4,7%)	N/S	N/S
		99	Mild or moderate cases		1. Depression 2. Anxiety 3. Examination panic 4. Personality disorder 5. Tiredness and lack of concentration	38 (38,4%) 18 (18,2%) 7 (7,1%) 6 (6,1%) 6 (6,1%)	N/S	N/S
Nicholi (1967)	Harvard University	551	"Psychiatric drop-out" student attendees from 09/55 to 06/60[11]	Psychiatric diagnoses (Diagnostic classes/Primary diagnoses) [ICD 2]	1. Neurotic disorder 2. Transient situational personality (adjustment) disorder 3. Character disorder 4. Psychotic disorder 5. Miscellaneous	196 (35,7%) 130 (23,6%) 122 (22,1%) 39 (7,1%) 64 (11,6%)	N/S	N/S
				(Axis I diagnoses/ Secondary diagnoses) [ICD 2]	1. Adjustment reaction of adolescence 2. Depressive reaction 3. Anxiety reaction 4. Schizoid personality 5. Passive-aggressive personality 6. Schizophrenic reaction 7. Sexual deviation 8. Emotionally unstable personality 9. Obsessive compulsive reaction 10. Manic depressive reaction 11. Compulsive personality 12. Cyclothymic personality 13. Inadequate personality 14. Miscellaneous	130 (23,6%) 122 (22,1%) 56 (10,1%) 36 (6,5%) 34 (6,2%) 29 (5,3%) 16 (2,9%) 15 (2,7%) 13 (2,4%) 7 (1,3%) 6 (1,1%) 6 (1,1%) 6 (1,1%) 64 (11,6%)	N/S	N/S

Reference	Location	N	Details of sample	Classification	Diagnoses/presenting complaints	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
Rosecan et al. (1992)	Georgetown University, USA	48[12]	Undergraduate student admissions to inpatient psychiatric unit from 01/87 to 12/89	Psychiatric diagnoses [DSM III]	1. Major depressive episode 2. Adjustment disorder with depressed mood 3. Bipolar affective disorder 4. Anorexia/bulimia nervosa 5. Borderline personality disorder	14 (29,2%) 10 (20,8%) 5 (10,4%) 4 (8,3%) 3 (6.3%)	0,8[13] 0,6[13] 0,3[13] 0,2[13] 0,2[13]	N/S
Schwarz (1964)	University of British Columbia, Canada	206	Student attendees from 09/62 to 05/65	Psychiatric diagnoses	1. Personality disorder 2. Psychoneurosis 3. Psychosis 4. Psychophysiological 5. Chronic brain syndrome	92 (44,6%) 81 (39,3%) 25 (12,1%) 6 (2,9%) 1 (0,5%)	6,7 5,9 1,8 0,4 0,1	N/S
				Presenting complaints	1. Depression 2. Studies 3. Somatic 4. Tension 5. Interpersonal 6. Insomnia 7. Sexual conflict[14] 8. Inadequacy 9. Domestic 10. Delusion	43 (20,9%) 38 (15,5%) 23 (11,2%) 23 (11,2%) 15 (7,3%) 13 (6,3%) 10 (4,9%) 9 (4,4%) 8 (3,9%) 6 (2,9%)	3,1 2,8 1,7 1,7 1,1 0,9 0,7 0,7 0,6 0,4	N/S
Selzer (1960)	University of Michigan, USA	506	Student attendees from 07/56 to 12/58	Psychiatric diagnoses [DSM I]	1. Psychoneurosis 2. Personality disorder 3. Schizophrenia 4. Adjustment problem 5. Other	180 (35,6%) 124 (24,5%) 110 (21,7%) 42 (8,3%) 50 (9,9%)	29,8[15] 20,5[15] 18,2[15] 7,0[15] 8,3[15]	N/S
Stangler and Printz (1980)	University of Washington, USA	500	Student attendees over unspecified 5 month period	Psychiatric diagnoses [DSM III] (Diagnostic classes except #7)	1. Adjustment disorders 2. Affective disorders 3. V codes 4. Anxiety disorders 5. Psychological factors affecting physical conditions 6. Eating disorders 7. Identity disorder 8. Psychosexual dysfunction	145 (29,0%) 127 (25,4%) 73 (14,6%) 46 (9,2%) 36 (7,2%) 22 (4,4%) 19 (3,8%) 12 (2,4%)	9,4[16] 8,2[16] 4,7[16] 3,0[16] 2,3[16] 1,4[16] 1,2[16] 0,8[16]	N/S
				(Axis I diagnoses)	1. Dysthymic disorder 2. Adjustment disorder with depressed mood 3. Adjustment disorder with mixed emotional features	79 (15,8%) 60 (12,0%) 53 (10,6%)	5,1[16] 3,9[16] 3,4[16]	N/S

Reference	Location	N	Details of sample	Classification	Diagnoses/presenting complaints	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
					4. Psychological factors affecting physical condition	36 (7,2%)	2,3[16]	
					5. Major depression	33 (6,6%)	2,1[16]	
					6. Marital problem	27 (5,4%)	1,8[16]	
					7. Other interpersonal problem	19 (3,8%)	1,2[16]	
					8. Bulimia	19 (3,8%)	1,2[16]	
					9. Identity disorder	19 (3,8%)	1,2[16]	
					10. Adjustment disorder with anxious mood	18 (3,6%)	1,2[16]	
Swartz et al. (1958)	Boston University, USA	322	Student attendees from 08/52 to 09/56	Psychiatric diagnoses	1. Personality disturbance	138 (42,9%)	N/S	N/S
					2. Neurotic reaction	112 (34,8%)		
					3. Transient situational disorder	36 (11,2%)		
					4. Psychotic reactions	23 (7,1%)		
					5. Evaluation only	10 (3,1%)		
U'ren et al. (1970)	US Military Academy at Westpoint, USA	119	Cadet attendees from 07/70 to 06/.71	Psychiatric diagnoses	1. Adjustment reaction	36 (30,3%)	9,5	N/S
					2. Psychophysiological reactions	15 (12,6%)	4,0	
					3. Suicide gestures	15 (12,6%)	4,0	
					4. Personality disorders	5 (4,2%)	1,3	
					5. Sexual problems	4 (3,4%)	1,1	
Walters (1970)	University of Illinois, USA	4 547	Student attendees from 09/58 to 06/68	Psychiatric diagnoses [DSM I]	1. Psychoneurotic reaction	1 327 (29,2%)	6,4	N/S
					2. Personality trait disturbance	1 187 (26,1%)	5,7	
					3. Transient situational disorder	1 010 (22,2%)	4,8	
					4. Psychophysiological reaction	287 (6,3%)	1,4	
					5. Schizophrenic reaction	236 (5,2%)	1,1	
					6. Sociopathic personality	234 (5,1%)	1,1	
		1 327		Psychoneurotic reactions	1. Anxiety	660 (49,7%)	3,1	N/S
					2. Depression	416 (31,4%)	2,0	
					3. Obsessive-compulsive	141 (10,6%)	0,7	
					4. Conversion	52 (3,9%)	0,2	
					5. Phobic	30 (2,3%)	0,1	
					6. Dissociative	24 (1,8%)	0,1	
					7. Other	4 (0,3%)	0,0	
		287		Psychophysiological Reactions	1. Gastrointestinal	135 (47,0%)	0,6	N/S
					2. Musculoskeletal	63 (22,0%)	0,3	
					3. Cardiovascular	38 (13,2%)	0,2	
					4. Respiratory	20 (7,0%)	0,1	
					5. Skin	13 (4,5%)	0,1	
					6. Genitourinary	12 (4,2%)	0,1	
					7. Nervous system	6 (2,1%)	0,0	

Reference	Location	N	Details of sample	Classification	Diagnoses/presenting complaints	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
Winer and Dorus (1972)	University of Chicago, USA	273	First, fourth and fifth year undergraduate student attendees from 09/68 to 06/70	Presenting complaints	1. Affective complaints	174 (63,7%)	38,8[17]	N/S
					2. Interpersonal complaints	162 (59,3%)	36,2[17]	
					3. Academic complaints	126 (46,2%)	28,2[17]	
					4. Self inadequacy	93 (34,1%)	20,8[17]	
					5. Somatic complaints	65 (23,8%)	14,5[17]	
					6. Alienation and/or identity	34 (12,5%)	7,6[17]	
					7. Suicidal thoughts	20 (7,3%)	4,5[17]	
					8. Drug	18 (6,6%)	4,0[17]	
		174		Affective complaints	1. Anxiety	102 (37,4%)	22,8[17]	N/S
					2. Depression	82 (30,0%)	18,3[17]	
					3. Anger	21 (7,7%)	4,7[17]	
					4. Unspecified and miscellaneous	64 (23,4%)	14,3[17]	
		162		Interpersonal complaints	1. Opposite sex	73 (26,7%)	16,3[17]	N/S
					2. Family	49 (17,9%)	10,9[17]	
					3. Same sex peers	7 (2,6%)	1,6[17]	
					4. Spouse	5 (1,8%)	1,1[17]	
					5. Superiors, teachers	4 (1,5%)	0,9[17]	
					6. Unspecified and miscellaneous	83 (30,4%)	18,5[17]	
		65		Somatic complaints	1. Sleep disturbance	29 (10,6%)	6,5[17]	N/S
					2. Gastrointestinal	21 (7,7%)	4,7[17]	
					3. Genitourinary	9 (3,3%)	2,0[17]	
					4. Central nervous system	5 (1,8%)	1,1[17]	
					5. Cardiopulmonary	2 (0,7%)	0,4[17]	
					6. Unspecified and miscellaneous	16 (5,9%)	3,6[17]	
Wogan and Amdur (1974)	University of Connecticut, USA	200[18]	Student attendees from 09/71 to 06/72	Presenting Complaints	1. Affective difficulties	69 (34,5%)	31,1	N/S
					2. Interpersonal problems	66 (33,0%)	29,7	
					3. Alienation or identity problems	34 (17,0%)	15,3	
					4. Somatic complaints	14 (7,0%)	6,3	
					5. Self-adequacy problems	8 (4,0%)	3,6	

Reference	Location	N	Details of sample	Classification	Diagnoses/presenting complaints	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
(b) Developing (third world) countries								
German and Arya (1969)	Makerere University College, Uganda	121	Student attendees from 10/66 to 06/67	Psychiatric diagnoses	1. Anxiety neurosis 2. Reactive depression 3. Personality disorders 4. Psychoses 5. Hysteria	75 (62,0%) 23 (19,0%) 9 (7,4%) 8 (6,6%) 6 (5,0%)	55,5 17,0 6,7 5,9 4,4	N/S
		75		Anxiety neurosis precipitants	1. Fear of examinations 2. Fear of venereal disease 3. Fear of other disease 4. Genital anxiety 5. Social problems 6. Financial problems 7. No single precipitant	30 (40,0%) 25 (33,3%) 8 (10,7%) 3 (4,0%) 3 (4,0%) 2 (2,7%) 4 (5,3%)	22,2 18,5 3,9 2,2 2,2 1,5 3,0	N/S
Wig et al. (1971)	Panjab University, India	68	Student attendees from 09/66 to 06/67	Presenting complaints[19]	1. Difficulty in concentration 2. Frequent sad moods 3. Getting nervous at times of stress 4. Inferiority feelings 5. Difficulty in memory 6. Obsessive thinking and/or compulsive behaviour 7. Feelings of worthlessness of life 8. Excessive worrying 9. Excessive fantasy 10. Feelings of loneliness	34 (50,0%) 17 (25,0%) 16 (23,5%) 15 (22,1%) 15 (22,1%) 14 (20,6%) 13 (19,1%) 12 (17,7%) 11 (16,2%) 8 (11,8%)	N/S	N/S
				Body complaints (psychosomatic conditions)	1. Headache 2. Laziness/fatigue 3. Disturbed sleep 4. Excessive sleep 5. Pain in the eyes 6. Nausea/giddiness	16 (23,5%) 12 (17,7%) 9 (13,2%) 8 (11,8%) 8 (11,8%) 6 (8,8%)	N/S	N/S

Reference	Location	N	Details of sample	Classification	Diagnoses/presenting complaints	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
(c) Southern African countries								
Germond (1997)	Medical University of Southern Africa (MEDUNSA)	142[20]	Student consultations (rather than attendees) from 01-12/96	Presenting Complaints	1. Feeling anxious, tense, nervous 2. Feeling depressed 3. Disturbance of sleep 4. Acute stress 5. Neurasthenia (suminage) 6. Inhibition/loss of sexual drive or fulfilment	63 (44,1%) 42 (29,4%) 17 (11,9%) 8 (5,6%) 7 (4,9%) 5 (3,5%)	N/S	N/S
Mlotha (1997)	Vista University – Bloemfontein campus	421	Student attendees from 01-12/96	Presenting complaints	1. Career 2. Personal 3. Academic 4. Miscellaneous	296 (70,3%) 24 (5,7%) 13 (3,1%) 88 (20,9%)	N/S	N/S
	Vista University – East Rand campus	1 651			1. Personal 2. Career 3. Academic 4. Miscellaneous	412 (25,0%) 201 (12,2%) 142 (8,6%) 896 (54.3%)	N/S	N/S
	Vista University – Mamelodi campus	2 189			1. Personal 2. Career 3. Academic 4. Miscellaneous	1 046 (47,8%) 795 (36,3%) 291 (13,3%) 57 (2,6%)	N/S	N/S
	Vista University – Port Elizabeth campus	819			1. Career 2. Personal 3. Academic 4. Miscellaneous	442 (54,0%) 148 (18,1%) 61 (7,4%) 168 (20,5%)	N/S	N/S
	Vista University – Sebokeng campus	939			1. Career 2. Personal 3. Academic 4. Miscellaneous	340 (36,2%) 302 (32,2%) 138 (14,7%) 159 (16,9%)	N/S	N/S
	Vista University – Soweto campus	7 609			1. Career 2. Academic 3. Personal 4. Miscellaneous	5 335 (70,1%) 546 (7,2%) 528 (6,9%) 1 200 (15,8%)	N/S	N/S
	Vista University – Welkom campus	3 302			1. Career 2. Academic 3. Personal 4. Miscellaneous	1 170 (35,4%) 436 (13,2%) 293 (8,9%) 1 403 (42,5%)	N/S	N/S

Reference	Location	N	Details of sample	Classification	Diagnoses/presenting complaints	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
	Vista University – Bloemfontein campus	4 561	Student attendees from 01/94-12/96		1. Career 2. Personal 3. Academic 4. Miscellaneous	3 193 (70,0%) 345 (7,6%) 172 (3,8%) 851 (18,7%)	N/S	N/S
	Vista University – East Rand campus	4 645			1. Career 2. Personal 3. Academic 4. Miscellaneous	1 672 (36,0%) 1 257 (27,1%) 387 (8,3%) 1 329 (28,6%)	N/S	N/S
	Vista University – Mamelodi campus	6 224			1. Personal 2. Career 3. Academic 4. Miscellaneous	2 974 (47,8%) 2 027 (32,6%) 841 (13,5%) 382 (6,1%)	N/S	N/S
	Vista University – Port Elizabeth campus	1 144	[Student attendees from 07-10/95 and 01-12/96][21]		1. Career 2. Personal 3. Academic 4. Miscellaneous	515 (45,0%) 221 (19,3%) 104 (9,1%) 304 (26,6%)	N/S	N/S
	Vista University – Sebokeng campus	4 558			1. Academic 2. Personal 3. Career 4. Miscellaneous	1 629 (35,7%) 1 518 (33,3%) 1 252 (27,5%) 159 (3,5%)	N/S	N/S
	Vista University – Soweto campus	19 924			1. Career 2. Personal 3. Academic 4. Miscellaneous	11 185 (56,1%) 3 853 (19,3%) 3 666 (18,4%) 1 220 (6,1%)	N/S	N/S
	Vista University – Welkom campus	3 930	[Student attendees from 01-12/94 and 01-12/96][21]		1. Career 2. Academic 3. Personal 4. Miscellaneous	1 423 (36,2%) 571 (14,5%) 533 (13,6%) 1 403 (35,7%)	N/S	N/S
Mupunga (1997)	University of Zimbabwe	473	Student attendees from 01-12/96	Psychiatric diagnoses	1. Stress-related illness 2. Anxiety and panic states 3. Depression 4. Substance abuse 5. Schizo-affective disorder 6. Psychotic episodes	190 (40,2%) 185 (39,1%) 48 (10,1%) 21 (4,4%) 15 (3,2%) 14 (3,0%)	18,9 18,4 4,8 2,1 1,5 1,4	N/S

Reference	Location	N	Details of sample	Classification	Diagnoses/presenting complaints	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
Naidoo (1997)	University of the Western Cape	1 004	Student attendees from 01-12/95	Presenting complaints	1. Study skills concerns	313 (31,2%)	26,0	N/S
					2. Depression	279 (27,8%)	23,2	
					3. Course change	236 (23,5%)	19,6	
					4. Anxiety and stress	233 (23,2%)	19,4	
					5. Decision making concerns	224 (22,3%)	18,6	
					6. Family problems	220 (21,9%)	18,3	
					7. Emotional upheaval	199 (19,8%)	16,6	
					8. Financial pressures	186 (18,5%)	15,5	
					9. Information need	180 (17,9%)	15,0	
					10. Growth and self-identity	168 (16,7%)	13,9	
					11. Career concerns	158 (15,7%)	13,1	
					12. Self-esteem issues	157 (15,6%)	13,0	
					13. Couple relationships	150 (14,9%)	12,5	
					14. Shyness and unassertiveness	128 (12,7%)	10,6	
					15. Test anxiety	110 (11,0%)	9,1	
					16. Suicidal thoughts	84 (8,4%)	7,0	
					17. Homesickness	83 (8,3%)	6,9	
					18. Other specified concerns	81 (8,1%)	6,7	
					19. Lack of social contact	68 (6,8%)	5,6	
					20. Aggressiveness towards others	67 (6,7%)	5,6	
					21. Eating and weight concerns	65 (6,5%)	5,4	
					22. Conflict with others on campus	58 (5,8%)	4,8	
					23. Concerns about sexuality	52 (5,2%)	4,3	
					24. Concerns with lectures	51 (5,1%)	4,2	
					25. Bereavement issues	46 (4,6%)	3,8	
					26. Loss of contact with reality	45 (4,5%)	3,7	
					27. Other personal concerns	42 (4,2%)	3,5	
					28. Political issues	41 (4,1%)	3,4	
					29. Sexual harassment/rape	39 (3,9%)	3,2	
					30. Problems with personal habits	32 (3,2%)	2,7	
					31. Other social concerns	29 (2,9%)	2,4	
					32. Substance abuse	28 (2,8%)	2,3	
					33. Problems with own children	26 (2,6%)	2,2	
				Category of presenting complaints	1. Academic, Social and Personal concerns	257 (25,6%)	21,3	N/S
					2. Only Academic concerns	181 (18,0%)	15,0	
					3. Disruptive and Other concerns	135 (13,4%)	11,2	
					4. Social and Personal concerns	111 (11,1%)	9,2	
					5. Academic and Personal concerns	104 (10,4%)	8,6	
					6. Only Personal concerns	88 (8,8%)	7,3	
					7. Only Social concerns	56 (5,6%)	4,6	
					8. Academic and Social concerns	51 (5,1%)	4,2	
					9. Only Potentially disruptive	13 (1,3%)	1,1	
					10. No response given	8 (0,8%)	0,7	

Reference	Location	N	Details of sample	Classification	Diagnoses/presenting complaints	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
				Affect on academic performance	Nil	63 (8,3%)	5,2	N/S
					Little	121 (15,9%)	10,0	
					Moderate	160 (21,0%)	13,3	
					Considerable	198 (26,0%)	16,4	
					Severe	220 (28,9%)	18,3	
					Missing	242		
				Affect on social life	Nil	102 (14,8%)	8,5	N/S
					Little	124 (18,0%)	10,3	
					Moderate	146 (21,2%)	12,1	
					Considerable	191 (27,7%)	15,9	
					Severe	126 (18,3%)	10,5	
					Missing	315		
				Affect on personal life	Nil	66 (9,2%)	5,5	N/S
					Little	85 (11,9%)	7,1	
					Moderate	121 (16,9%)	10,0	
					Considerable	204 (28,5%)	16,9	
					Severe	240 (33,5%)	19,9	
					Missing	288		
				Affect on functioning	Nil	24 (4,0%)	2,0	N/S
					Little	58 (9,6%)	4,8	
					Moderate	124 (20,5%)	10,3	
					Considerable	212 (35,0%)	17,6	
					Severe	187 (30,9%)	15,5	
					Missing	399		
		722	Student attendees from 01-12/96	Presenting complaints	1. Concern about career choice	217 (30,1%)	28,4	N/S
					2. Coping with depression	195 (27,0%)	25,5	
					3. Fear of failure	180 (24,9%)	23,6	
					4. Job search strategies	143 (19,8%)	18,7	
					5. Improving study skills	126 (17,5%)	16,5	
					6. Understanding career interests,abilities	122 (16,9%)	16,0	
					7. Controlling anxiety and nervousness	121 (16,8%)	15,9	
					8. Problems with parents	117 (16,2%)	15,3	
					9. Coping with a broken relationship	104 (14,4%)	13,6	
					10. Increasing self confidence	102 (14,1%)	13,4	
					11. Increasing motivation	97 (13,4%)	12,7	
					12. Other concerns (undefined)	93 (12,9%)	12,2	
					13. Discomfort in social situations	82 (11,4%)	10,7	
					14. Finding greater purpose in life	80 (11,1%)	10,5	
					15. Time management skills	78 (10,8%)	10,2	
					16. Recurrent headaches or stomach aches	72 (10,0%)	9,4	
					17. Selection of major subject	71 (9,8%)	9,3	

Reference	Location	N	Details of sample	Classification	Diagnoses/presenting complaints	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
					18. Improving reading skills	68 (9,4%)	8,9	
					19. Public speaking anxiety	64 (8,9%)	8,4	
					20. Overcoming shyness	63 (8,7%)	8,3	
					21. Coping with loneliness	63 (8,7%)	8,3	
					22. Problems with controlling temper	61 (8,4%)	8,0	
					23. Test anxiety	60 (8,3%)	7,9	
					24. Eliminating self-defeating behaviour	59 (8,2%)	7,7	
					25. Learning test-taking strategies	49 (6,8%)	6,4	
					26. Becoming more assertive	47 (6,5%)	6,2	
					27. Suicidal feelings	43 (6,0%)	5,6	
					28. Concerns about sexual functioning	38 (5,3%)	5,0	
					29. Controlling weight	37 (5,1%)	4,8	
					30. Overcoming procrastination	37 (5,1%)	4,8	
					31. Concerns about relationships with academic staff	26 (3,6%)	3,4	
					32. Eating disorders	26 (3,6%)	3,4	
					33. Meeting people to date	23 (3,2%)	3,0	
					34. Roles and expectations for men and women	21 (2,9%)	2,8	
					35. Conflicts over values and morals	21 (2,9%)	2,8	
					36. Insomnia	19 (2,6%)	2,5	
					37. Sexual harassment	18 (2,5%)	2,4	
					38. Maths anxiety	15 (2,1%)	2,0	
					39. Coping with prejudice	13 (1,8%)	1,7	
					40. Adjustments to campus	11 (1,5%)	1,4	
					41. Controlling drinking	11 (1,5%)	1,4	
					42. Adjustment to residence	10 (1,4%)	1,3	
					43. Concerns about sexual identity	9 (1,2%)	1,2	
					44. Anxiety about AIDS	8 (1,1%)	1,0	
					45. Peer pressure to drink to excess	7 (1,0%)	0,9	
					46. Adjusting to culture norms	4 (0,6%)	0,5	
Venter (1997)	University of the Free State	2 576	Student attendees from 01-12/96	Presenting complaints[22]	1. Career choice problems	1 065 (41,3%)	118,3	N/S
					2. Adjustment and development disorders	940 (36,5%)	104,4	
					3. Mood disorders	247 (9,6%)	27,4	
					4. Learning problems	240 (9,3%)	26,7	
					5. Personality problems or disorders	80 (3,1%)	8,9	

Footnotes

1. The author, recognising the hazards and inadequacies of using traditional psychiatric nomenclature in the student age group, has attempted to classify the students seen into relatively broad categories which could have general descriptive utility – hence the classification employed has been described as being based on modified psychiatric diagnoses.

2. At least three additional students (to those reporting to the Student Mental Health Service) were hospitalised during the academic year of study with schizophrenia – consequently other schizophrenic students may have been marginally functioning without coming to the attention of college officials.

3. As the aim of the article was to determine whether more psychology students suffer from psychiatric disorders than other students, the nature and distribution of psychiatric disorder (as measured by the number of students visiting the College Medical Officer for psychiatric disorders) between psychology and non-psychology students was assessed. Therefore, the author documents separate comparable results, by gender and/or category of psychiatric disorder, for psychology and non-psychology students which are subjected to statistical analysis. As the number of psychology students visiting the College Medical Officer for psychiatric disorders was comparatively small (N=21) and as the specific aim of the UCT-SHS study is not to compare psychology students to other students, the separate attendance figures documented by the author have been combined into the results listed in Table 3.2.

4. The author states that sexual difficulties largely relate to homosexual problems – including homosexual interests, friendships and/or active relationships.

5. The entire case load of the College Mental Health Center for 1975 to 1977 was 847 cases but the authors excluded 33 cases due to various clerical reasons to leave a sample of 814 cases for which nearly complete data were available.

6. Although the entire case load of the Psychiatric Division for 1966/67 was 647 cases, the authors excluded 13 cases for diagnostic purposes due to unavailable data to leave a total of 634 students (331 males and 303 females). Therefore, this latter figure has been employed as the de facto total when percentages have been calculated for psychiatric diagnoses or presenting complaints.

7. The authors state that the diagnosis of passive-aggressive personality is not suggestive of the presence of a considerable amount of psychopathology, although this disturbance may be debilitating and possibly chronic.

8. The patient was asked to rate the severity of his/her problems for 10 problem areas (somatic complaints, financial problems, family, school, work, relationships with people of the same sex and opposite sex, future goals, self-satisfaction, and drug and alcohol problems). The first 9 problem areas were taken from the Mooney Problem Check List (Mooney and Gordon, 1950) while the tenth was added due to the contemporary emphasis on campus drug abuse. The patient used a 7-point scale to indicate the severity of his/her problems, and these ratings constituted the patient's perceived disturbance measures for each of the 10 problem areas in question.

9. "Emotional and sexual" refers to male-female or male-male pair bond problems of a sexual nature. All those presenting directly with abnormal physical sexual behaviour are included in this category, but some severe emotional factors of a sexual type are also included. These are mainly severe reactions following an unhappy sexual affair, and they all occurred, with one exception, in women. There were also some individuals whose prime diagnosis was anxiety or depression, but who had sexual problems which apparently caused them to present. These differences explain why the figures for sexual factors differ between the psychiatric diagnoses and the presenting complaints formats adopted by the author.

10. The classification employed in this study allowed scope for recognition of both formal psychiatric illness and "conspicuous psychiatric morbidity", where the doctor does not make a specific psychiatric diagnosis but appreciates the presence of psychological symptoms and signs and of physical conditions in which psychological factors are known to play a part.

11. A "psychiatric dropout" was defined as a student who left university, who consulted a psychiatrist one or more times before leaving, and who was given a specific psychiatric diagnosis by the psychiatrist.

12. Although there were 48 separate admissions of Georgetown University students to the mental healthcare unit during the 3 year study period, one student was admitted twice in 1989 and another was admitted twice, once in 1987 and again in 1989. Therefore, the remaining 44 admissions correspond with individual students hospitalised one time at Georgetown University Hospital. The original figure of 48 admissions has been employed when percentages have been calculated for psychiatric diagnoses.

13. Usage/utilisation rates per 1 000 students correspond to this sample to in-patient admissions rather than outpatient consultations as is the case with the remaining samples.

14. "Sexual conflict" includes concern about overt homosexuality, promiscuity and sexual inadequacy.

15. Usage/utilisation rates per 1 000 students are based on an overall mean usage/utilisation rate of 83,8 attendees per 1 000 students which corresponds to the individual usage/utilisation rates for 1956/57 of 84,0 (a 12 month period) and 1957/58 of 83,2 (a six month period).

16. As the sample covers only a five month study period, usage/utilisation rates have been calculated by multiplying patient numbers by a factor of 2,4.

17. Usage/utilisation rates per 1 000 students are based on an overall mean usage/utilisation rate of 61,0 attendees per 1 000 students which corresponds to the individual usage/utilisation rates for 1968/69 of 60,4 and 1969/70 of 61,7.

18. The entire case load of the Student Mental Health Service for 1971/72 was 1 052 cases but the authors employed a stratified sample of 200 cases divided proportionately by the month in which the patient applied to the clinic for the first time.

19. The presenting complaints were to a great extent directly related to the source of referral. Those who were referred by the Heads of teaching departments presented problems that were generally academic study difficulties, previous failure, inadequate aptitude for the subject of study, etc. Those who sought help voluntarily mostly complained of psychological difficulties like inferiority complex, indecision, lack of confidence, excessive rumination, etc. Those who were referred by the Medical Officers reflected their anxiety in physical symptoms, e.g. heaviness of head, strain in eyes on study, insomnia or excessive sleep and/or vague bodily symptoms.

20. The correspondent notes that quite a number of emotional problems presented with pain in various areas and sometimes they were recorded as "chest pain", "headache", "abdominal pain", "low back pain", or "syncope" instead of psychological aetiology of the pain or medical disorder. Therefore, the psychiatric diagnoses recorded are clearly mental or emotional categories (rather than these psychosomatic/psychophysiological conditions outlined above) and relate to the number of consultations required by patients rather than the actual number of patients, per se, seen at the Campus Health Service. This consultation-specific analysis is a departure from the patient-specific analysis employed in all the other studies reported in this section. The correspondent notes that students presenting with recognised psychiatric diagnoses (as outlined in Table 3.2) account for only 2,7 per cent of total consultations.

21. Incomplete statistics for the period of January 1994 to December 1996 have been recorded for these two Vista University campuses (Port Elizabeth and Welkom).

22. The Student Counselling Service gives preference to developmental and preventative work. The range of problems treated include: relationship problems, anxiety, depression, low self-esteem, personality disorders and problems, adjustment problems, learning problems, lack of motivation, crises, alcohol and drug abuse and career choice problems. The correspondent notes that the demand for development work has increased greatly, due to the influx of under prepared, disadvantaged students from rural areas. The service now addresses issues in connection with moral, ego, cognitive-ethical, inter-personal or intellectual growth.

The vast majority of the studies detailed in Table 3.2 do not provide any meaningful or, indeed, in-depth commentary concerning either the reason for or the significance of their clinical results but rather merely compare their major diagnostic categories to the corresponding findings reported by other authors (most of which appear in Table 3.2 anyway). Therefore, in the absence of this information, it is difficult to provide a meaningful discussion of this clinical data beyond merely cataloguing these results according to the five major diagnostic categories employed in the UCT-SHS study, viz. affective disorders, adjustment disorders, V-codes, anxiety (neurotic) disorders and "other" disorders including personality/character disorder, psychosomatic disorder, psychotic (schizophrenic) disorder and sexual disorder. In addition, Winer and Dorus (1972), quoted above in the subsection outlining the diagnosis of student mental illness, further highlight the difficulty of comparing studies detailing the attendees of various college/university mental health services because of the use of "consistently inconsistent" classification (p 134). They provide an eloquent example of this problem by quoting the classification systems adopted in the following studies whose results appear in Table 3.2: (i) Selzer (1960) divides his study patients into five categories: psychoneurosis, personality disorders, schizophrenia, adjustment problems and others; (ii) Friedman and Coons (1969) list categories of "most common presenting complaints" which include academic, depression and anxiety; (iii) Braaten and Darling (1961) use MMPI profiles to compare sociologically determined groups within their student population and (iv) Allen and Janowitz (1965) use five categories similar to Selzer's but include as a sixth "no pathology".

Furthermore, only seven of the 20 (or 35,0 per cent) samples detailed in Table 3.2 which employ psychiatric diagnoses (as opposed to the presenting complaints format) to document student mental disorders for developed (first world) countries and not the single sample for both developing (third world) and Southern African countries report the diagnostic classification system employed by the therapist – one (Nicholi, 1967) used the ICD 2 system, two (Fox and Reifler, 1967, and Selzer, 1960) utilised the DSM I system while the remaining three (Hersch, Nazario and Backus, 1983; Rosecan, Goldberg and Wise, 1992, and Stangler and Printz, 1980) made use of the DSM III system. On the other hand, the remaining 15 samples for developed (first world) countries, one sample for developing (third world) countries and five samples from Southern African countries adopted the presenting complaints format to detail their student mental disorders. These differing diagnostic classification and presenting complaints systems, therefore, further hinder the cataloguing of the results appearing in Table 3.2.

The statistical measures undertaken in these studies for clinical results did not extend beyond univariate techniques such as frequency counts and percentages relating to individual psychiatric diagnoses or presenting complaints. Measures of association such as χ^2 tests were not performed in order to assess the statistical significance of the findings detailed in these studies.

3.3.2.1 Patient-specific data

(a) Country and objective-specific outline

(i) Developed (first world) countries

A: Attendees (Objective 1)

For attendee (Objective 1)-specific data it is noteworthy that only four of the 51 (7,8 per cent) samples in which the overall number of student attendees is reported (including Gibbs, 1975, non-Black student attendees and total number of student attendees), employed greater than 2 000 student subjects. Only Walters (1970) records a cohort in excess of 4 500 (4 547) students. In addition, only an extra 11 (21,6 per cent) of the samples (including Frank and Kirk, 1976, University of California, Berkeley, Counseling Center and Counseling Center or Psychiatric service student attendees) employed between 500 and 1 000 student subjects. The majority of these studies comprising 28 (54,9 per cent) of the samples (including Dann, 1964, non-psychology students and psychology and non-psychology student attendees and Reinhold, 1973, University of Pennsylvania Counseling Service, Psychiatric Clinic and Counseling Service or Psychiatric Clinic student attendees) consist between 100 and 499 student subjects. The remaining eight (15,7 per cent) samples consisted of less than 100 student subjects with Dann (1964) reporting on just 21 psychology student attendees.

The majority of these samples are not exceptionally large considering the financial and professional resources available to the majority of tertiary educational facilities in these developed (first world) countries compared to those in, for example, developing (third world) countries. These resources should not only permit the training of skilled student mental health researchers but also allow them the requisite time to undertake long-term (circa 8–10 year) collection and collation of clinical/diagnostic-specific data. This extensive data would, in turn, provide university authorities with detailed information concerning the nature and distribution of disorders requiring evaluation and/or therapeutic intervention at the college/university mental health service. Only Davidson and Hutt (1964), Dunn et al. (1980), Fox and Reifler (1967) and Walters (1970) have conducted this type of long-term research although only the latter two samples consist of more than 2 000 student attendees.

B: Usage/utilisation rates (Objective 3)

For usage/utilisation rate (Objective 3)-specific data it is noteworthy that as many as five of the 40 (12,5 per cent) samples in which the overall usage/utilisation rate is reported, recorded usage/utilisation rates greater than 100 attendees per 1 000 students. A further 12 (30,0 per cent) of the samples accounted for usage/utilisation rates between 60 and 100 attendees per 1 000 students with six (15,0 per cent) recording rates between 60 and 80 attendees per 1 000 students. The greatest number of samples (17 or 42,5 per cent)

reported usage/utilisation rates between 20 and 60 attendees per 1 000 students with 10 (25,0 per cent) recording rates between 20 and 40 attendees per 1 000 students. Therefore between 20 and 60 (especially 20 and 40) would appear to represent the median range of student attendance at the mental health service with the preceding 16 samples corresponding to the upper range of values (greater than 60) and those mentioned below corresponding to the lower range (less than 20). The remaining seven (17,5 per cent) samples recorded usage/utilisation rates less than 20,0 attendees per 1 000 students although the study of Rosecan et al. (1992) which records the lowest figure is not comparable to the rest as it documents in-patient hospitalisations.

The comparatively high usage/utilisation rate reported by several of these developed (first world) college/university mental health services is probably indicative of the ready availability of appropriate on-campus facilities, not only to treat but also to successfully recognise (primary prevention) psychological or psychiatric complaints affecting students, rather than necessarily reflecting a disproportionately high incidence of mental disorders amongst the student community.

C: Mean number of consultations (Objective 4)

For mean number of consultation (Objective 4)-specific data only two of the 14 (14,3 per cent) samples in which the overall mean number of consultations is reported, recorded greater than six consultations per student. The remaining 12 (85,7 per cent) samples accounted for less than six consultations per student with eight (57,1 per cent) recording four to six consultations per student. Therefore between four and six (especially circa 4,50) would appear to represent the median range of student consultations at the mental health service with greater than six corresponding to the upper range of values and less than four corresponding to the lower range.

(ii) Developing (third world) countries

A: Attendees (Objective 1)

For attendee (Objective 1)-specific data it can be observed that there are no samples which employed greater than 500 student subjects. Indeed, only two of the six (33,3 per cent) samples in which the overall number of student attendees is reported employed greater 100 students with German and Arya (1969) recording the highest total of just 121 students. The remaining four (66,7 per cent) samples consisted of less than 100 student subjects with Ovuga, Buga and Guwatudde (1996) reporting on just 24 student attendees. These figures are much lower than those employed in developed (first world) countries where 15 (29,4 per cent) of the samples consisted of 500 or more student attendees increasing to 43 (84,3 per cent) samples containing 100 or more student attendees.

This disparity in both the number of research subjects and the number of studies, per se, is probably more indicative of a shortage of trained researchers and research funding rather than a lack of human research material. An additional possible constraint to the conducting of clinical research could be related to service pressure resulting from high patient numbers coupled with low staffing ratios. However, these problems have not prevented Makerere University (College) from providing five of the six samples quoted here. Indeed, this tertiary educational institution has a proud record of student mental health research dating back to the 1950s (Allbrook, 1955).

B: Usage/utilisation rates (Objective 3)

For usage/utilisation rate (Objective 3)-specific data only one of the five (20,0 per cent) samples in which the overall usage/utilisation rate is reported, recorded a usage/utilisation rate greater than 80 attendees per 1 000 students (German and Arya, 1969, at Makerere University College, Uganda). The remaining four (80,0 per cent) samples accounted for usage/utilisation rates less than 40 attendees per 1 000 students with three (60,0 per cent) recording rates less than 20 attendees per 1 000 students. These figures are much lower than those obtained from developed (first world) countries where 33 (82,5 per cent) of the samples reported usage/utilisation rates greater than 20,0 attendees per 1 000 students.

This disparity could be due to a combination of cultural factors whereby psychotherapeutic intervention is frowned upon and a lack of professional resources to perform evaluation and/or therapeutic intervention. The latter possibility has previously been discussed in the corresponding attendee (Objective 1)-specific data subdivision where reasons are postulated for the paucity of studies undertaken in developing (third world) countries.

C: Mean number of consultations (Objective 4)

For mean number of consultation (Objective 4)-specific data only one sample reported the overall mean number of consultations (Wig, Nagpal and Khanna, 1971, at Panjab University, India) at 3,3 consultations per student. This figure is somewhat lower than those obtained from developed (first world) countries where eight (57,1 per cent) of the samples reported a mean of four to six (circa 4,50) consultations per student. This minor disparity, which is difficult to contextualise from the results of only one study, could also relate to a lack of professional resources to perform evaluation and/or therapeutic intervention so that, in order to manage a heavy patient load, shorter term psychotherapy is provided.

(iii) Southern African countries

A: Attendees (Objective 1)

For attendee (Objective 1)-specific data it is highly relevant that 10 of the 19 (52,6 per cent) samples in which the overall number of student attendees is reported employ greater than 2 000 student subjects – in fact, six of the 19 (31,6 per cent) record cohorts in excess of 4 500 students. However, it must be noted that the Vista University and University of the Free State samples which reported these elevated figures included career counselling and academic-related problems in their lists of presenting complaints. The vast majority of samples quoted from the literature detailing developed (first world) and developing (third world) countries are confined purely to student psychological or psychiatric complaints presenting at the college/university mental health service. This situation is probably due to either the presence of separate careers counselling centres and academic development programmes at the majority of tertiary educational institutions in developed (first world) countries or the inability of colleges/universities in developing (third world) countries to offer such student-orientated services. Of the remaining samples outside of Vista University and the University of the Free State, only one (5,3 per cent) from the University of the Western Cape (Naidoo, 1997) employed greater than 1 000 (1 004) students. The other UWC sample recorded between 500 and 1 000 (722) students while the last two samples (Germond, 1997, and Mupunga, 1997) reported cohorts of less than 500 but greater than 100 (142 and 473, respectively) students. These figures are, therefore, comparable with those employed in developed (first world) countries and considerably better than those derived from developing (third world) countries.

Due to the legacy of apartheid, the facilities serving students in local historically White universities are compatible with those existing in tertiary educational institutions in the USA from which the majority of developed (first world) country samples are derived. Conversely, the majority of local historically Black universities are subject to the conditions, outlined above, affecting developing (third world) country institutions. Although this review does not employ a particularly large sample of local colleges/universities (due to a poor response to a request for relevant patient and clinical/diagnostic-specific data), it is, however, fairly representative of the above dichotomy insofar as the University of the Free State is a historically White university, the University of the Western Cape is a historically Coloured university and MEDUNSA is a historically Black (African) university. Therefore, this intermediate position between developed and developing countries with respect to sample size could be regarded as an illustration of this first world/third world divide displayed by Southern African society.

B: Usage/utilisation rates (Objective 3)

For usage/utilisation rate (Objective 3)-specific data it can be observed that only one of the four (25,0 per cent) samples in which the overall usage/utilisation rate is reported, recorded a usage/utilisation rate greater than 100 attendees per 1 000 students (Venter, 1994). However, the University of the Free State

Counselling Service does not exclusively function as a mental health service since it also provides career counselling which accounts for over 40 per cent of attendees. Therefore, this figure is not directly comparable to the others listed. A further two (50,0 per cent) of the samples reported usage/utilisation rates between 60 and 100 attendees per 1 000 students with both recording rates between 80 and 100 attendees per 1 000 students. Therefore between 60 and 100 (especially 80 and 100) would appear to represent the median range of student attendance at the mental health service with the preceding sample corresponding to the upper range of values (greater than 100) and that mentioned below corresponding to the lower range (less than 40). The remaining one (25,0 per cent) sample recorded a usage/utilisation rate between 20 and 60 attendees per 1 000 students (Mupunga, 1997). These figures are comparable with those obtained from developed (first world) countries where 17 (42,5 per cent) of the samples reported usage/utilisation rates greater than 60 attendees per 1 000 students.

It is noteworthy that the lowest usage/utilisation rate is recorded by the University of Zimbabwe which has a predominantly Black (African) student community whereas the University of the Western Cape and the University of the Free State have predominantly Coloured and White student communities, respectively. This finding, which may well be related to the varying racial composition of the respective student communities, may be due to cultural differences concerning the acceptability of psychotherapy existing between these diverse population groups. The historical discrepancy existing between various Southern African universities that could further contribute to this finding has previously been discussed in the corresponding attendee (Objective 1)-specific data subdivision.

C: Mean number of consultations (Objective 4)

For mean number of consultation (Objective 4)-specific data no sample reported the overall mean number of consultations.

(b) Explanation

(i) Usage/utilisation rates (Objective 3)

> *As the pressures of academic life intensify, as universities grow larger and more impersonal, and as the demands for a college education (or a college diploma) increase, we may confidently anticipate that all the campus helping agencies, including mental health and counseling services, will find themselves in heavy demand.*
>
> (Allen and Janowitz, 1964: p. 378)

This statement is patently an indictment of a college/university system and a society that place high pressure and (often) undue expectations, respectively, on young adults thereby promoting the development of mental disorders and an increased usage/utilisation rate of student mental health services. Weiss, Segal and Sokol

(1965) note that since a number of studies (e.g. Hollingshead and Redlich, 1958; Mechanic and Volkart, 1961; Phillips, 1963; Srole et al., 1962) indicate that the willingness to admit to illness is itself a variable affected by other psychological and social influences, it is clear that a distinction must be drawn between treatment (usage/utilisation) rates, based on patients who have by definition admitted to illness, and prevalence rates, based on a measure of disturbance that has actually been applied among a general population. Likewise, Reifler, Liptzin and Fox (1967) state that not all students who present themselves as patients are diagnosed as sick and, conversely, not all non-patients are healthy. Thus one is unable to assess the true incidence or prevalence of psychiatric illness from mental health services usage/utilisation rates. However, the more acute or more severe the illness, the greater is the probability of the individual's behaviour bringing him/her to the eye of the public and to the psychiatrist for evaluation. This thesis employs UCT-SHS-MHS usage/utilisation rates rather than true prevalence rates which would be assessed by student needs assessments.

Reifler and Liptzin (1969) and Reifler, Liptzin and Fox (1967) state that in the absence of some standardisation in terms of per cent of student population or rate per thousand, the data obtained are more useful for comparisons of operating clinics than for comparisons between different colleges/universities and student bodies or for aid in identifying some of the factors influencing illness. Consistent findings with the reported literature can be assumed to represent problems of the college/university student group. Where there are divergences it would seem that some factor or factors in the social system of the individual institution should have first priority for study. Baker (1964) states that the following factors should be considered in interpreting quoted usage/utilisation rates: (i) some students will prefer private or other extra-university professional resources to mental health services offered within the college/university; (ii) other troubled students will prefer to seek help from other kinds of persons or agencies inside or outside the college/university, and (iii) they may not seek help at all. Likewise, Thompson, Bentz and Liptzin (1973) report that mental health service usage/utilisation is influenced by: (i) students' willingness to seek help; (ii) service availability, and (iii) the extent of non-psychiatric services on campus (i.e. advisors, chaplains, etc.).

Walters (1970) notes that increased usage/utilisation of college/university mental health services does not necessarily reflect a rise in the prevalence of mental illness but could rather be attributed to wider student awareness of psychiatric services together with more general student and faculty acceptance. Likewise, Reifler, Liptzin and Fox (1967) observe that students with situational or adjustment problems were more inclined to talk to a psychiatrist without defining themselves as psychiatric patients. Therefore, the authors note, there appeared to be a growing sophistication among students and, hopefully, a weakening of the stigmata attached to seeking help for emotional disturbances.

(ii) Mean number of consultations (Objective 4)

> *While behavioural scientists have tried for three decades to delineate factors predictive of the duration of treatment, a satisfactory understanding of the phenomenon has remained elusive.*
>
> (Jenkins, Fuqua and Blum, 1986: p. 466)

Hopper (1972) reports that demands for increased availability of mental health services have grown on college/university campuses in much the same way that characterised their growth among the American public generally. In the latter case, the "community mental health" (refer to community psychology in Chapter 2) movement became a rallying point for those who hoped to find optimally effective ways to respond to rapidly accelerating public demands. One very prominent dimension of demands for mental health services by both student and the general public is that of professional time allocated to them. The most commonly reported index of time demands for campus mental health services has been "average number of contacts (consultations)" by students.

In discussing this demand for mental health services, Gibbs (1975) notes that the duration of therapy was sometimes not closely related to the severity of the presenting symptoms or to the diagnosis. However, Dunn et al. (1980) report that patient data reveals that patients with more serious diagnoses utilise more therapeutic time than those with less serious problems. Nixon (1961) feels that many of the emotional difficulties which college/university students encounter can be resolved rather quickly with competent help. In this vein, Pinkerton (1994) notes that annual college/university mental health service statistics reveal that 50 per cent to 60 per cent of all student attendees are seen for very brief psychological interventions of 5 or less consultations. The author notes (from studies by Dorosin, Gibbs and Kaplan, 1976, and Haggerty, Baldwin and Liptzin, 1980, inter alia) that, although a limited number of students discontinue the therapy because their needs are not met or because they do not feel a connection with their therapist, a substantial portion express satisfaction with these very brief contacts.

In the case of students who discontinued their therapy, Mennicke, Lent and Burgoyne (1988) define premature termination as clients/patients leaving treatment before they should while Miller (1983) defined dropouts from treatment as those clients/patients who failed to return after the initial interview (consultation), failed to return prior to a mutually agreed upon time of termination, or failed to keep their initial appointment. Pekarik (1983) has estimated that 30 to 60 per cent of all out-patient psychotherapy clients drop out of treatment prematurely. Findings from studies at college/university mental health services have indicated that some personality variables may be related to premature termination – these included low self-esteem (Robbins et al., 1985), low anxiety (Jenkins, Fuqua and Blum, 1986), high tolerance for ambiguity (Heilbrun, 1982) and impulsivity (Kirk and Frank, 1976).

3.3.2.2 Clinical/diagnostic-specific data

(a) Affective disorder

(i) Country and objective-specific outline

In developed (first world) countries this major diagnostic category is the second most commonly reported (excluding "other") in the literature reviewing developed (first world) countries (15 of the 35 samples – excluding gender and race/population group-specific results – reported in 28 articles).

- The proportion presenting in students attending the various mental health services varies between a maximum of 63,7 per cent (Winer and Dorus, 1972) to a minimum of 4,5 per cent (Hersch, Nazario and Backus, 1983) [Objective 1].
- The usage/utilisation rate per 1 000 students varies between a maximum of 38,8 (Winer and Dorus, 1972) to a minimum of 7,6 (Craig, 1974) although Rosecan, Goldberg and Wise, 1992, recorded a value of 1,1 for in-patient hospitalisations [Objective 3].
- Only one sample (Friedman and Coons, 1969) reported the mean number of consultations required with a value of 3,3 consultations per student [Objective 4].

In developing (third world) countries this major diagnostic category is documented in both samples in two articles reviewing developing (third world) countries.

- The proportion presenting in students attending the various mental health services varies between 25,0 per cent (Wig, Nagpal and Khanna, 1971) and 19,0 per cent (German and Arya, 1969). However, some of the other presenting complaints listed by the authors (i.e. feelings of worthlessness of life and feelings of loneliness) could also indicate the presence of an underlying affective disorder [Objective 1].
- Only one sample (German and Arya, 1969) recorded a usage/utilisation rate per 1 000 students of 17,0 [Objective 3].
- Neither sample reported the mean number of consultations required [Objective 4].

In Southern African countries this major diagnostic category is documented in all five samples – excluding gender and race/population group-specific results – obtained from four Southern African universities (the Vista University samples (Mlotha, 1997) have not been included for further commentary as they do not provide any clinical data beyond the somewhat diffuse diagnosis of personal complaint).

- The proportion presenting in students attending the various mental health services varies between a maximum of 29,4 per cent (Germond, 1997) to a minimum of 9,6 per cent (Venter, 1997) [Objective 1].
- The usage/utilisation rate per 1 000 students varies between a maximum of 27,4 (Venter, 1997) to a minimum of 4,8 (Mupunga, 1997) [Objective 3].
- No sample reported the mean number of consultations required [Objective 4].

(ii) Consequence

Affective disorders, which form relatively important diagnoses in relation to their proportion of total mental disorders in both developed (first world), developing (third world) and Southern African countries, can be responsible for much morbidity in the student community. In this vein, Wright-Short (1967) notes that a depressive reaction, the occurrence of which may not always be recognised at examination time or any other time, may inhibit study completely, and as work falls further into arrears, so may the illness become intensified. Likewise, Nicholi (1967) notes that depression is by far the most frequent and the most significant causal factor in the decision of students to interrupt or terminate their college/university experience. The most frequent cause of depression among dropouts is related to an awareness of a disparity between the ideal self as a uniquely gifted intellectual achiever and the real self as one of thousands of outstanding students struggling in a threateningly competitive environment. This awareness, gradual or abrupt, results in the clinical picture frequently observed in the dropout: (i) feelings of lassitude; (ii) inadequacy; (iii) hopelessness; (iv) low self-esteem, and (v) inability to study.

(b) Adjustment disorder

(i) Country and objective-specific outline

In developed (first world) countries this major diagnostic category is the third most commonly reported (excluding "other") in the literature reviewing developed (first world) countries (12 of the 35 samples – excluding gender and race/population group-specific results – reported in 28 articles).

- The proportion presenting in students attending the various mental health services varies between a maximum of 38,6 per cent (Craig, 1974) to a minimum of 8,3 per cent (Selzer, 1960) [Objective 1].
- The usage/utilisation rate per 1 000 students varies between a maximum of 16,1 (Craig, 1974) to a minimum of 7,0 (Selzer, 1960) although Rosecan, Goldberg and Wise, 1992, recorded a value of 0,6 for in-patient hospitalisations [Objective 3].
- No sample reported the mean number of consultations required [Objective 4].

In developing (third world) countries no sample reported adjustment disorders as a clinical diagnosis.

In Southern African countries this major diagnostic category is documented in two of the five samples – excluding gender and race/population group-specific results – obtained from four South African universities (the Vista University samples (Mlotha, 1997) have not been included for further commentary as they do not provide any clinical data beyond the somewhat diffuse diagnosis of personal complaint).

- The proportion presenting in students attending the various mental health services varies between a maximum of 36,5 per cent (Venter, 1997) to a minimum of 3,5 per cent (Naidoo, 1997, for 1996 UWC Centre for Student Counselling attendances) [Objective 1].
- The usage/utilisation rate per 1 000 students varies between a maximum of 104,4 (Venter, 1997) to a minimum of 3,2 (Naidoo, 1997, for 1996 attendees) [Objective 3].

- Neither sample reported the mean number of consultations required [Objective 4].

It must be noted that the figure quoted by Naidoo (1997) is derived by combining three separate presenting complaints (viz. (i) adjustments to campus; (ii) adjustment to residence, and (iii) adjusting to culture norms). There may be yet further presenting complaints that could be considered as adjustment disorders which, if included under this diagnosis, would considerably boost the above quoted percentage and usage/utilisation rate of student attendees. Although neither author provides a reason for the above widely divergent usage/utilisation rates for Southern African college/university mental health services, factors relating to, inter alia, accessibility of the mental health services, student awareness of their existence or staffing ratios of these facilities may contribute to these findings.

Craig (1974) feels that reactive depression (refer to affective disorders above) is related to adjustment disorders as both diagnostic categories are primarily based on the student's response to immediate stress. Furthermore, Stangler and Printz (1980) observe that the high frequency of adjustment disorder with depressed mood is to be expected in the student population as sequelae to the many stressors of the university experience such as: (i) relationship conflicts and loss; (ii) academic demands and failure, and (iii) separation from home and family. Similarly, Friedman and Coons (1969) report that the most frequent presenting complaint associated with the clinical diagnosis of adjustment disorder was academic or study problems followed closely by anxiety and depression. In this vein, Kysar (1964) observes that some situational reactions (adjustment disorders) occur in youth with relatively healthy personalities while some occur in youth with personality disorders and neurotic patterns of behaviour which have been building for years. Selzer (1960) notes that, contrary to all expectations, adjustment disorders were practically non-existent in his sample. However, this situation could, at least, be partially due to students with problems of less magnitude (which are probably compatible with adjustment disorders) not being seen by a psychiatrist. Furthermore, the author notes that a student of college age who chronically retains adolescent attitudes and reactions to the detriment of his/her emotional, social and academic life is probably mentally ill rather than being affected by an (adolescent) adjustment problem.

(ii) Consequence

No commentary was provided by authors in the literature concerning the consequences of this major diagnostic category.

(c) V-codes

(i) Country and objective-specific outline

In developed (first world) countries this major diagnostic category is the least commonly reported (excluding "other") in the literature (only two of the 35 samples – excluding gender and race/population group-specific results – reported in 28 articles).

- The proportion presenting in students attending the various mental health services varies between a maximum of 61,5 per cent (Hersch, Nazario and Backus, 1983) to a minimum of 14,6 per cent (Stangler and Printz, 1980) [Objective 1].
- Only one sample (Stangler and Printz, 1980) recorded a usage/utilisation rate per 1 000 students of 4,7 [Objective 3].
- Neither sample reported the mean number of consultations required [Objective 4].

In developing (third world) countries this major diagnostic category is not reported in the literature.

In Southern African countries this major diagnostic category is not reported in the material obtained from universities.

(ii) Consequence

No commentary was provided by authors in the literature concerning the consequences of this major diagnostic category.

However, many of the presenting complaints are compatible with the individual V-codes and will be discussed separately below.

– Relationship problem

(i) Country and objective-specific outline

In developed (first world) countries this individual V-code is reported in three of the 35 samples – excluding gender and race/population group-specific results – reported in 28 articles. The presenting complaint of "interpersonal problem" is not included here as it could also include the separately listed entries of "family problem" and/or "marital problem".

- The proportion presenting in students attending the various mental health services varies between a maximum of 61,0 per cent (Golinger, 1991) to a minimum of 7,3 per cent (Friedman and Coons, 1969) [Objective 1].
- Only one sample (Winer and Dorus, 1972) recorded a usage/utilisation rate per 1 000 students of 16,3 [Objective 3].

- No sample reported the mean number of consultations required [Objective 4].

In developing (third world) countries no sample reported relationship problems as a presenting complaint.

In Southern African countries this individual V-code is reported in two of the five samples (both from the University of the Western Cape – Naidoo, 1997) – excluding gender and race/population group-specific results – obtained from four South African universities (the Vista University samples (Mlotha, 1997) have not been included for further commentary as they do not provide any clinical data beyond the somewhat diffuse diagnosis of personal complaint).

- The proportion presenting in students attending the Centre for Student Counselling varies between a maximum of 14,9 per cent (1995 attendees) to 14,4 per cent (1996 attendees) – an minimal difference of 0,5 per cent between successive years at the same mental health service [Objective 1].
- The usage/utilisation rate per 1 000 students varies between a maximum of 13,6 (1996 attendees) to 12,5 (1995 attendees) – again a minimal difference of 1,1 per 1 000 students between successive years at the same mental health service [Objective 3].
- Neither sample reported the mean number of consultations required [Objective 4].

(ii) Consequence

No commentary was provided by authors in the literature concerning the consequences of this individual V-code.

– Family problem

(i) Country and objective-specific outline

In developed (first world) countries this individual V-code is reported in four of the 35 samples – excluding gender and race/population group-specific results – reported in 28 articles.

- The proportion presenting in students attending the various mental health services varies between a maximum of 47,0 per cent (Golinger, 1991) to a minimum of 9,0 per cent (Dunn et al., 1980) [Objective 1].
- Only one sample (Winer and Dorus, 1972) recorded a usage/utilisation rate per 1 000 students of 10,9 [Objective 3].
- No sample reported the mean number of consultations required [Objective 4].

In developing (third world) countries no sample reported family problems as a presenting complaint.

In Southern African countries this individual V-code is reported in two of the five samples (both from the University of the Western Cape – Naidoo, 1997) – excluding gender and race/population group-specific results – obtained from four South African universities (the Vista University samples (Mlotha,

1997) have not been included for further commentary as they do not provide any clinical data beyond the somewhat diffuse diagnosis of personal complaint).

- The proportion presenting in students attending the Centre for Student Counselling varies between a maximum of 21,9 per cent (1995 attendees) to 16,2 per cent (1996 attendees) – a slightly larger difference of 5,7 per cent (compared to relationship problems) between successive years at the same mental health service [Objective 1].
- The usage/utilisation rate per 1 000 students varies between a maximum of 18,3 (1995 attendees) to 15,3 (1996 attendees) – again a slightly larger difference of 3,0 per 1 000 students between successive years at the same mental health service [Objective 3].
- Neither sample reported the mean number of consultations required [Objective 4].

(ii) Consequence

No commentary was provided by authors in the literature concerning the consequences of this individual V-code.

– Academic problem

(i) Country and objective-specific outline

In developed (first world) countries this individual V-code is reported in eight of the 35 samples – excluding gender and race/population group-specific results – reported in 28 articles.

- The proportion presenting in students attending the various mental health services varies between a maximum of 46,2 per cent (Winer and Dorus, 1972) to a minimum of 6,5 per cent (Hersch, Nazario and Backus, 1983) [Objective 1].
- The usage/utilisation rate per 1 000 students varies between a maximum of 28,2 (Winer and Dorus, 1972) to a minimum of 2,8 (Schwarz, 1964) [Objective 3].
- Only one sample (Friedman and Coons, 1969) reported the mean number of consultations required with a value of 2,5 consultations per student [Objective 4].

In developing (third world) countries this individual V-code is reported in only one of the two samples reported in two articles.

- The proportion presenting in students attending the various mental health services is restricted to 72,1 per cent (Wig, Nagpal and Khanna, 1971) [Objective 1].
- This sample recorded no usage/utilisation rate per 1 000 students [Objective 3].
- This sample reported no mean number of consultations required [Objective 4].

In Southern African countries this individual V-code is reported in two of the five samples (both from the University of the Western Cape – Naidoo, 1997) – excluding gender and race/population group-specific results – obtained from four South African universities (the Vista University samples (Mlotha,

1997) have not been included for further commentary as they do not provide any clinical data beyond the somewhat diffuse diagnosis of personal complaint).

- The proportion presenting in students attending the Centre for Student Counselling varies between a maximum of 31,2 per cent (1995 attendees) to 24,9 per cent (1996 attendees) – again a slightly larger difference of 6,3 per cent (compared to relationship problems) between two successive years at the same mental health service [Objective 1].
- The usage/utilisation rate per 1 000 students varies between a maximum of 26,0 (1995 attendees) to 23,6 (1996 attendees) – again a slightly larger difference of 2,4 per 1 000 students (compared to relationship problems) between successive years at the same mental health service [Objective 3].
- Neither sample reported the mean number of consultations required [Objective 4].

Winer and Dorus (1972) report that it was an unexpected finding that, contrary to popular notions about the orientation of the modern college/university student, nearly half of those attending their clinic expressed concern or dissatisfaction with their academic achievement. The authors note, however, that the mention of academic problems often occurred in the context of another problem, such as a relationship problem. They also query whether the frequency of this complaint is related to reasonable needs unmet by the academic programme at the undergraduate level of the University.

(ii) Consequence

Academic problems which are potentially an important diagnosis (or contributory factor) in relation to their proportion of total mental disorders in developing (third world) countries and a fairly important diagnosis in both developed (first world) and Southern African countries can be responsible for much morbidity within the student community. However, it is noteworthy that Horenstein (1976) reports that, contrary to the general consensus that the academic area of students' lives creates the greatest number of emotional problems, concern over "self" (i.e. self-satisfaction, self-image, etc.) is the greatest source of problems for students who seek psychological services. The author remarks that it is quite possible that college/university-related problems (including academic problems) contributed to student concern in the area of self. However, this concern apparently was reflected in a personalised psychological discomfort (i.e. within the student's feelings about himself/herself), and not expressed as a college/university problem per se.

Operationally, perceived academic stress, which is often the consequence of academic problems, is defined and measured by Ragheb and McKinney (1993) as: (i) performing assignments under tight time deadlines, (ii) having more than a reasonable load of projects and exams, (iii) not getting much done in university, (iv) expecting to do many tasks in too little time and (v) difficulty dealing with instructors (academic staff). Aldwin and Greenberger (1987) report that perceived academic stress relates to anxiety and depression in college/university students.

– Bereavement

(i) Country and objective-specific outline

In developed (first world) countries no sample reported bereavement as a presenting complaint.

In developing (third world) countries no sample reported bereavement as a presenting complaint.

In Southern African countries this individual V-code is reported in only one of the five samples (from the University of the Western Cape – Naidoo, 1997) – excluding gender and race/population group-specific results – obtained from four South African universities (the Vista University samples (Mlotha, 1997) have not been included for further commentary as they do not provide any clinical data beyond the somewhat diffuse diagnosis of personal complaint).

- The proportion presenting in students attending the Centre for Student Counselling is restricted to 4,6 per cent (1995 attendees) [Objective 1].
- This sample (1995 attendees) recorded a usage/utilisation rate per 1 000 students of 3,8 [Objective 3].
- This sample reported no mean number of consultations required [Objective 4].

(ii) Consequence

This solitary finding would possibly seem to suggest (bearing in mind the inherent danger of generalising the results of a single study) that bereavement could be an important diagnosis (or contributing factor) in relation to their proportion of total mental disorders and usage/utilisation rate in students presenting at college/university mental health services in Southern African countries [or, indeed, developed (first world) and developing (third world) countries] when documented or recognised as such.

– Unplanned/unwanted pregnancy

In developed (first world) countries, developing (third world) countries and Southern African countries no sample reported unplanned/unwanted pregnancy as a presenting complaint. However, this particular complaint may contribute to other psychiatric diagnoses.

(d) Anxiety (neurotic) disorder

(i) Country and objective-specific outline

In developed (first world) countries this major diagnostic category is the most commonly reported (excluding "other") in the literature reviewing developed (first world) countries (18 of the 35 samples –

excluding gender and race/population group-specific results – reported in 28 articles). It must be noted that the terms anxiety and neurosis are not necessarily synonymous although most of the authors quoted here do use these terms interchangeably. Therefore, in this subdivision, both these terms have been linked.

- The proportion presenting in students attending the various mental health services varies between a maximum of 48,7 per cent (Dann, 1964) to a minimum of 3,5 per cent (Hersch, Nazario and Backus, 1983) [Objective 1].
- The usage/utilisation rate per 1 000 students varies between a maximum of 36,7 (Kidd and Caldbeck-Meenan, 1966, for University of Edinburgh attendees) to a minimum of 1,7 (Schwarz, 1964) [Objective 3].
- Only one sample (Friedman and Coons, 1969) reported the mean number of consultations required with a value of 3,6 consultations per student [Objective 4].

In developing (third world) countries this major diagnostic category is documented in both samples in two articles reviewing developing (third world) countries.

- The proportion presenting in students attending the various mental health services varies between a maximum of 67,0 per cent (German and Arya, 1969) to 61,8 per cent (Wig, Nagpal and Khanna, 1971) [Objective 1].
- Only one sample (German and Arya, 1969) recorded a usage/utilisation rate per 1 000 students of 55,5 [Objective 3].
- Neither sample reported the mean number of consultations required [Objective 4].

- This major diagnostic category is documented in four of the five samples – excluding gender and race/population group-specific results – obtained from four Southern African universities (the Vista University samples (Mlotha, 1997) have not been included for further commentary as they do not provide any clinical data beyond the somewhat diffuse diagnosis of personal complaint).
- The proportion presenting in students attending the various mental health services varies between a maximum of 79,3 per cent (Mupunga, 1997) to a minimum of 16,8 per cent (Naidoo, 1997, for 1996 UWC Centre for Student Counselling attendees) [Objective 1].
- The usage/utilisation rate per 1 000 students varies between a maximum of 37,3 (Mupunga, 1997) to a minimum of 15,9 (Naidoo, 1997, for 1996 attendees) [Objective 3].
- No sample reported the mean number of consultations required [Objective 4].

Coelho et al. (1963) note that in order to maintain a sense of worth and keep anxiety within noninterfering limits involves a readiness to mobilise inner personal resources to meet new demands – especially: (i) the capacity for doing meaningful work; (ii) actively seeking out problem-solving opportunities, and (iii) working out diverse sources of intellectual gratification outside the normal academic curriculum. Dann (1964) reports that the marked preponderance of anxiety (neurotic) disorders in his student sample was expected although no further commentary is provided to explain this finding. The author also notes that the incidence of this disorder (as well as psychosomatic disease) tends to decrease relative to the number of students as their numbers rise. He expresses surprise at this trend since it might well be expected that these disorders would be minimised in a small student community, but would increase as the student community grew and its members became less well known to each other and consequently more isolated. Furthermore, the author wonders whether there is an optimum number of students after which the relative incidence of

these disorders increases again. This seemingly anomalous finding could possibly have important implications for UCT which is a tertiary educational institution in the midst of a major transformation process whereby an increasing number of previously marginalized students are being admitted. It is possible that such an increase in their numbers may also cause a decrease in the incidence of anxiety (neurotic) disorders in this group of students as it would present them with an increased opportunity for socialising with each other. However, it would be extremely important to assess the optimal rate for transformation to gauge whether this ongoing process should be accelerated possibly to further reduce student anxieties. On the other hand, Friedman and Coons (1969) report that only just over a quarter of students complaining of anxiety as a presenting complaint were actually diagnosed by the resident therapist as being affected by this disorder. The authors also note that there is a clear relationship between the incidence of anxiety (neurotic) disorder and academic standing insofar as the further a student progresses in college/university, the greater the likelihood that he/she will receive this diagnosis. However, no further commentary is provided to explain this phenomenon.

Wig, Nagpal and Khanna (1971) report that, among the anxiety neuroses, symptom patterns of free-floating anxiety, somatisation, obsessive ruminations and sexual conflicts were most common. Such students were found to have manifestations of poor life-adjustment in their previous history of physical or psychological illness.

(ii) Consequence

Anxiety (neurotic) disorders which are very important diagnoses in relation to their proportion of total mental disorders in developing (third world) countries and an important diagnosis in both developed (first world) and Southern African countries can be responsible for much morbidity within the student community – especially at examination time. In this respect, Sarason (1983) notes that anxiety is a very personal experience that involves anticipations of danger, harm and inability to meet challenges. In the case of test anxiety, these anticipations are linked to evaluational situations. Test anxious people see evaluational situations as difficult, challenging and threatening and themselves as ineffective in coping with academic challenges. The author notes that although significant negative correlations are usually reported between test anxiety and academic performance, their magnitude is, however, generally low. He also suggests that test anxiety measures correlate negatively during the first two years of university only, after which there is no relationship between test anxiety and academic performance. However, Savage (1974) determined that anxiety is one of the factors that lead to underachievement at college/university.

Malleson (1957) observes that there are three principal ways in which cases of examination anxiety present in students: (i) the largest group (circa 50 per cent) present with classic symptoms of overt anxiety associated with the impending examinations – including sleeplessness, persistent daytime apprehension with thoughts continually turning pessimistically to the examinations and difficulty in retaining and recalling recently learned material; (ii) the next largest group (circa 30 per cent) complain of increasing

lassitude frequently associated with nocturnal insomnia and dropping to sleep over textbooks during the day – the student may, in fact, not recognise that these symptoms are related to the impending examinations, and (iii) the smallest group (circa 20 per cent) present with physical symptoms that are clearly psychosomatic like tension headache or dyspepsia. The author notes that the fear felt by the student is two-handed: (i) there is a fear of failure, and (ii) there is a fear of the examination itself. These fears usually coexist but are sometimes quite distinct from one another.

(e) Other disorders

– Personality/character disorder

(i) Country and objective-specific outline

In developed (first world) countries this mental disorder is reported in 18 of the 35 samples – excluding gender and race/population group-specific results – reported in 28 articles.

- The proportion presenting in students attending the various mental health services varies between a maximum of 44,6 per cent (Schwarz, 1964) to a minimum of 2,8 per cent (Jones, 1972) [Objective 1].
- The usage/utilisation rate per 1 000 students varies between a maximum of 20,5 (Selzer, 1960) to a minimum of 1,3 (U'ren, Conrad and Patterson, 1973) although Rosecan, Goldberg and Wise, 1992, recorded a value of 0,2 for in-patient hospitalisations [Objective 3].
- No sample reported the mean number of consultations required [Objective 4]

In developing (third world) countries this mental disorder is reported in one of the two samples reported in two articles.

- The proportion presenting in students attending the various mental health services is restricted to 7,4 per cent (German and Arya, 1969, at Makerere University College, Uganda) [Objective 1].
- This sample (German and Arya, 1969) recorded a usage/utilisation rate per 1 000 students of 6,7 [Objective 3].
- This sample reported no mean number of consultations required [Objective 4].

In Southern African countries this mental disorder is reported in only one of the five samples – excluding gender and race/population group-specific results obtained from four Southern African universities (the Vista University samples (Mlotha, 1997) have not been included for further commentary as they do not provide any clinical data beyond the somewhat diffuse diagnosis of personal complaint).

- The proportion presenting in students attending the various mental health services is restricted to 3,1 per cent (Venter, 1997, at the University of the Free State) [Objective 1].
- This sample (Venter, 1997) recorded a usage/utilisation rate per 1 000 students of 8,9 [Objective 3].
- This sample reported no mean number of consultations required [Objective 4].

Swartz, Posin and Kaye (1958) report that the preponderance of evidence is that the symptomatology of personality/character disorder is deep-rooted, fixed and alterable only with considerable long-term treatment. The authors note that short-term therapeutic results cannot be expected in the majority of instances. This observation is relevant to the UCT-SHS-MHS insofar as evaluation and/or therapeutic intervention is generally limited to six sessions which would constitute short-term therapy. Furthermore, Jones (1972) notes that if students have substantial symptoms of anxiety or depression, the probability that they will have a personality disorder is increased to some extent. These individuals may be at risk, not only of anxiety or depression, but of symptoms referable to their underlying personality disorder. On the other hand, neither Kidd and Caldbeck-Meenan (1966) nor U'ren, Conrad and Patterson (1973) comment in any depth regarding the reason for or significance of their findings regarding the lack of personality/character disorders in student attendees although the latter do allude to preselection factors playing a role.

(ii) Consequence

Personality/character disorders which are a fairly important diagnosis in developed (first world) countries and not an important diagnosis in relation to their proportion of total mental disorders in both developing (third world) and Southern African countries can be responsible for some morbidity within the student community. In this vein, Jones (1972) defines a personality disorder as being present in an individual if any personality trait was sufficiently prominent or absent to cause distress to him/her or to society, provided that this trait was present at least from late adolescence. Since it is fairly common for personality traits to lead to problems in adolescence, and these students are only a few years past adolescence, the author notes that it is possible that some of them will eventually mature and, in a few years, fail to show any personality disorders. This commentary is in contrast to the views expressed in the DSM III R (Diagnostic and Statistical Manual of mental disorders, Third Edition, Revised) (APA, 1987) which states that the personality is more formed by this stage of development.

– Psychosomatic/psychophysiological disorder

(i) Country and objective-specific outline

In developed (first world) countries this mental disorder is reported in eight of the 35 samples – excluding gender and race/population group-specific results – reported in 28 articles.

- The proportion presenting in students attending the various mental health services varies between a maximum of 35,8 per cent (Dann, 1964) to a minimum of 2,9 per cent (Schwarz, 1964) [Objective 1].
- The usage/utilisation rate per 1 000 students varies between a maximum of 14,5 (Winer and Dorus, 1972) to a minimum of 0,4 (Schwarz, 1964) [Objective 3].
- No sample reported the mean number of consultations required [Objective 4].

In developing (third world) countries this mental disorder is reported in one of the two samples reported in two articles.

- The proportion presenting in students attending the various mental health services is restricted to 86,8 per cent (Wig, Nagpal and Khanna, 1971) [Objective 1].
- This sample recorded no usage/utilisation rate per 1 000 students [Objective 3].
- This sample reported no mean number of consultations required [Objective 4].

In Southern African countries this mental disorder is reported in two of the five samples – excluding gender and race/population group-specific results – obtained from four Southern African universities (the Vista University samples (Mlotha, 1997) have not been included for further commentary as they do not provide any clinical data beyond the somewhat diffuse clinical diagnosis of personal complaints).

- The proportion presenting in students attending the various mental health services varies between a maximum of 10,0 per cent (Naidoo, 1997, for 1996 attendees) to 4,9 per cent (Germond, 1997). [Objective 1].
- Only one sample (Naidoo, 1997, for 1996 attendees) recorded a usage/utilisation rate per 1 000 students of 9,4 [Objective 3].
- Neither sample reported the mean number of consultations required [Objective 4].

Dann (1964) reports that the marked preponderance of psychosomatic/ psychophysiological disorders in his student sample was expected although no further commentary is provided to explain this finding. The author also notes that the incidence of this disorder (as well as anxiety (neurotic) disorder) tends to decrease relative to the number of students as their numbers rise. (This seemingly anomalous finding is further discussed under the subheading outlining anxiety (neurotic) disorders.) It is important that psychosomatic/psychophysiological disorders presenting at the UCT-SHS are recognised early. If the underlying psychological basis for these seemingly physical complaints is overlooked, many of these students will repeatedly return to the nursing sister or medical officer requesting treatment. These unnecessary repeat visits for a seemingly incurable condition not only cause these students much distress but also deny fellow students with genuine physical complaints rapid access to appropriate medical care.

(ii) Consequence

Psychosomatic/psychophysiological disorders which are potentially an important diagnosis in relation to their proportion of total mental disorders in developing (third world) countries and a fairly important diagnoses in developed (first world) countries although, apparently (and unlikely), not an important diagnosis in Southern African countries can be responsible for much morbidity within the student community. In this regard, Prince (1960 and 1962) describes a distinctive cluster of symptoms occurring in Nigerian students referred to as the "Brain Fag" syndrome, a name by which the students themselves know the conditions, and is characterised by the following complaints associated with study: (i) unpleasant head sensations (pain, burning, crawling feelings, etc.); (ii) visual difficulties (blurring, eye pain, excessive tearing, etc.); (iii) inability to grasp the meaning of printed symbols; (iv) poor

retentivity and (v) fatigue and sleepiness in spite of adequate rest. These symptoms may be so severe as to be incapacitating.

Further studies in Nigeria, employing self-administered questionnaires, also detected very high levels of "Brain Fag" symptom prevalence (Ebigbo, 1982; Jegede, 1983). This syndrome of somaticised anxiety associated with education has subsequently been described in other parts of Africa (Mbanefo, 1966; German and Arya, 1969) and New Guinea (Anumonye, 1973). In the Southern African context, Guiness (1992a) found, in a survey of 2 040 senior secondary school students in different types of school in Swaziland, that rates were highest in rural areas in schools serving largely peasant populations where 34 per cent of secondary school students on average scored above the cut-off points of the SRQ – 24 screening instrument, compared with 22 per cent in periurban schools and only 6 per cent in schools patronised by the professional elite.

Several authors have postulated a social aetiology for the "Brain Fag" syndrome (Guiness, 1992b). Anumonye (1980) suggested the importance of disruptive effects of urbanisation and destruction of cultural patterns in Nigeria. Thebaud and Rigamer (1972), in Liberia, commented on the over-expectations of education. Minde (1974) observed the disparity between student origin and ambition. Binitie (1983) has described how the financial sacrifices made by the extended family to procure education can induce anxiety in the student. Further aetiological theories have focused on individual factors such as student academic ability, temperament, ambition or parental pressure to succeed (Prince, 1962; Minde, 1974; Udofot, 1975; Morakinyo, 1980 and 1983). Rwegellera (1981) has suggested that "Brain Fag" syndrome is a form of masked depression as the depressive features are not articulated in recognised western psychological terms. Finally, Guiness (1992b) proposes a transitional aetiology – insofar as adolescents, having a group orientation and representing the hopes and investment of their extended families, contend with the demands of an alien, exam-based, individually orientated educational system, concerning which there is considerable competition expressed in cultural terms as bewitchment. The least able students and those lacking the cohesive support of their families are most vulnerable. These aetiological determinants are extremely relevant to many historically disadvantaged Black students (some of whom reside in Swaziland and other African countries) attending the University of Cape Town and should, therefore, be considered by resident UCT-SHS-MHS medical officers treating these students for various non-specific physical disorders which could be compatible with any of the individual complaints of "Brain Fag" syndrome.

– Psychotic disorder

(i) Country and objective-specific outline

In developed (first world) countries this mental disorder is reported in 13 of the 35 samples – excluding gender and race/population group-specific results – reported in 28 articles.

- The proportion presenting in students attending the various mental health services varies between a maximum of 21,7 per cent (Selzer, 1960) to a minimum of 2,0 per cent (Kidd and Caldbeck-Meenan, 1966, for Queen's University of Belfast students) [Objective 1].
- The usage/utilisation rate per 1 000 students varies between a maximum of 18,2 (Selzer, 1960) to a minimum of 1,1 (Walters, 1970) [Objective 3].
- No sample reported the mean number of consultations required [Objective 4].

In developing (third world) countries this mental disorder is reported in one of the two samples reported in two articles.

- The proportion presenting in students attending the various mental health services is restricted to 6,6 per cent (German and Arya, 1969) [Objective 1].
- This sample (German and Arya, 1969) recorded a usage/utilisation rate per 1 000 students of 5,9 [Objective 3].
- This sample reported no mean number of consultations required [Objective 4].

In Southern African countries this mental disorder is reported in two of the five samples – excluding gender and race/population group-specific results – obtained from four Southern African universities (the Vista University samples (Mlotha, 1997) have not been included for further commentary or they do not provide any clinical data beyond the somewhat diffuse diagnosis of personal complaint).

- The proportion presenting in students attending the various mental health services varies between a maximum of 6,2 per cent (Mupunga, 1997) to 4,5 per cent (Naidoo, 1997, for 1995 attendees) [Objective 1].
- The usage/utilisation rate per 1 000 students varies between a maximum of 3,7 (Naidoo, 1997, for 1995 attendees) to a minimum of 2,9 (Mupunga, 1997) [Objective 3].
- Neither sample reported the mean number of consultations required [Objective 4].

Selzer (1960) reports that the high frequency of psychotic disorder presenting in his student attendees could probably be explained by the diagnostic criteria employed insofar as the diagnosis of schizophrenia was not reserved solely for persons having definite disorders of thought and perception. Instead, this diagnosis was made, or at least suspected, on the basis of severe affective disturbance, inability to establish meaningful object relationships, conceptual difficulties and behavioural aberration. It is important that all professional staff at the UCT-SHS be made aware of the symptoms of psychotic disorder in order to promote early detection of this potentially extremely debilitating condition. On the other hand, neither Kidd and Caldbeck-Meenan (1966) nor Jones (1972) comment in any depth regarding the reason for or significance of their findings regarding the lack of psychotic disorders in students although the latter notes that the florid delusions that are commonly seen in a general psychiatric hospital were rare in their sample.

German and Arya (1969) note that the cases of psychotic illness seen at Makerere University College, Uganda, were strikingly similar to the classical Western descriptions of this illness although the content, particularly of paranoid delusions, was dominated by local student preoccupations with politics, race and education. The confusional admixture which is so often seen in psychotic states in the general African

population was entirely absent stressing the probable importance of either organic or toxic factors, or the effect of pre-literate cultural attitudes on the production of confusion.

(ii) Consequence

Psychotic disorders which are not an important diagnosis in relation to their proportion of total mental disorders in both developed (first world), developing (third world) and Southern African countries can, however, be responsible for much morbidity within the student community. In this respect, Carey and Swartz (1971) report that many of the students exhibiting severe psychopathology usually present themselves early in the semester, due to difficulty in functioning in a new situation. They often manifest withdrawal or overt bizarre behaviour and are the most difficult students to treat because they: (i) lack insight; (ii) are poorly motivated to seek help, and (iii) are highly resistant and hostile. The authors note that the more moderately disturbed students of this group can function in college/university to some degree with the aid of medication and therapy. Furthermore, Craig (1972) suggests that a relatively high proportion of students who experience psychotic episodes may go unrecognised by the student mental health service until their emotional distress causes them to drop out of the academic system entirely. If this scenario is true, the author recommends that student mental health services must develop much more intensive casefinding programmes if they are to discover these students early enough to prevent their developing full-blown psychoses requiring interruption of their college/university careers, an event which carries a considerable hazard for the student's future career. In quantifying the severity of this hazard, Reifler, Liptzin and Fox (1967), however, report that at least one-third of students at the University of North Carolina at Chapel Hill diagnosed as having a psychotic illness had either received their degree or were currently enrolled and making satisfactory progress toward it. This proportion is less than the figure of 50 per cent in studies summarised by Farnsworth (1966).

– Sexual disorder

(i) Country and objective-specific outline

In developed (first world) countries this mental disorder is reported in nine of the 35 samples – excluding gender and race/population group-specific results – reported in 28 articles.

- The proportion presenting in students attending the various mental health services varies between a maximum of 12,3 per cent (Buckle, 1972) to a minimum of 2,4 per cent (Stangler and Printz, 1980) [Objective 1].
- The usage/utilisation rate per 1 000 students varies between a maximum of 1,6 (Carmen, Zerman and Blaine, 1968, for athletes) to a minimum of 0,7 (Schwarz, 1964) [Objective 3].
- No sample reported the mean number of consultations required [Objective 4].

In developing (third world) countries no sample reported sexual disorders as a clinical diagnosis or presenting complaint. (However, fear of venereal disease and genital anxiety coded by German and

Arya (1969) at Makerere University College, Uganda, as precipitants of anxiety neurosis accounted for a combined proportion of 37,3 per cent of attendees.)

In Southern African countries this mental disorder is reported in three of the five samples – excluding gender and race/population group-specific results – obtained from four Southern African universities (the Vista University samples (Mlotha, 1997) have not been included for further commentary as they do not provide any clinical data beyond the somewhat diffuse diagnosis of personal complaint).

- The proportion presenting in students attending the various mental health services varies between a maximum of 5,3 per cent (Naidoo, 1997, for 1996 attendees) to 3,5 per cent (Germond, 1997) [Objective 1].
- The usage/utilisation rate per 1 000 students varies between a maximum of 5,0 (Naidoo, 1997, for 1996 attendees) to 4,3 (Naidoo, 1997, for 1995 attendees) – a minimal difference of 0,7 per 1 000 students between successive years at the same mental health service [Objective 3].
- No sample reported the mean number of consultations required [Objective 4].

It must be noted that, contrary to current medical practice, Jones (1972) has classified homosexuality as a sexual disorder. In line with this outdated practice, he comments that among these homosexual students, a desire to change their sexual orientation does exist, but this desire seems to stem from the social and legal implications of homosexuality rather than from ethical objections or from guilt.

(ii) Consequence

Sexual disorder which is not an important diagnosis in developed (first world), developing (third world) or Southern African countries can be responsible for some morbidity within the student community. Although not a serious or life-threatening complaint, this condition may be sufficiently severe to impair a student's academic functioning – the impact of this impairment being most severe for the academically borderline student. This academic dysfunction is secondary to the declining level of self-esteem and social functioning that can often be the direct consequence of the presenting sexual disorder. Therefore, it would be totally inappropriate to trivialise this condition.

(f) Summary

The relative importance of the individual major diagnostic categories, V-codes and other mental disorders amongst students attending the various mental health facilities serving tertiary educational institutions in developed (first world), developing (third world) and Southern African countries are listed below in Table 3.3 – in the same order in which they appear in this subdivision. These disorders are ranked primarily according to their appearance in the 42 samples detailed in the Literature Review although, where two (or more) clinical diagnoses appear in the identical number of samples, secondary ranking is according to the mean proportion recorded by each of these disorders presenting in students attending the various college/university mental health services.

Table 3.3 Relative importance of individual clinical diagnoses of students attending college/university mental health facilities.

(a) Developed (first world) countries				
Diagnoses	**Appearance (ex 35 samples)**		**Mean proportion**	**Rank**
	n	**%**		
Affective disorder	15	42,9	28,1	3
Adjustment disorder	12	34,3	24,2	5
V-codes (general)	2	5,7	38,1	11
- Relationship problem	3	8,6	31,7	10
- Family problem	4	11,4	22,7	9
- Academic problem	8	22,9	25,4	7
- Bereavement	0	0,0		12
- Unplanned pregnancy	0	0,0		12
Anxiety (neurotic) disorder	18	51,4	24,2	1
Other disorders				
- Personality disorder	18	51,4	19,1	2
- Psychosomatic disorder	8	22,9	13,4	8
- Psychotic disorder	13	37,1	8,3	4
- Sexual disorder	9	25,7	7,5	6
(b) Developing (third world) countries				
Diagnoses	**Appearance (ex 2 samples)**		**Mean proportion**	**Rank**
	n	**%**		
Affective disorder	2	100,0	22,0	2
Adjustment disorder	0	0,0		7
V-codes (general)	0	0,0		7
- Relationship problem	0	0,0		7
- Family problem	0	0,0		7
- Academic problem	1	50,0	72,1	4
- Bereavement	0	0,0		7
- Unplanned pregnancy	0	0,0		7
Anxiety (neurotic) disorder	2	100,0	64,4	1
Other disorders				
- Personality disorder	1	50,0	7,4	5
- Psychosomatic disorder	1	50,0	86,8	3
- Psychotic disorder	1	50,0	6,6	6
- Sexual disorder	0	0,0		7
(c) Southern African countries				
Diagnoses	**Appearance (ex 5 samples)**		**Mean proportion**	**Rank**
	n	**%**		
Affective disorder	5	100,0	20,8	1
Adjustment disorder	2	40,0	20,0	5
V-codes (general)	0	0,0		12
- Relationship problem	2	40,0	14,7	7
- Family problem	2	40,0	19,1	6
- Academic problem	2	40,0	28,1	4
- Bereavement	1	20,0	4,6	10
- Unplanned pregnancy	0	0,0		12
Anxiety (neurotic) disorder	4	80,0	39,0	2
Other disorders				
- Personality disorder	1	20,0	3,1	11
- Psychosomatic disorder	2	40,0	7,5	8
- Psychotic disorder	2	40,0	5,4	9
- Sexual disorder	3	60,0	4,7	3

It must be noted that the failure of authors to document a clinical diagnosis in samples reported in the Literature Review does not necessarily mean that this mental disorder is unimportant and, therefore, of little concern to the student community.

3.3.2.3 Concluding comments

> *The student clientele of the university MHS is, then, a mixed batch: neurotics, psychotics, curiosity seekers, immature characters, somatizers, troublesome dormitory companions, cultists, sexual deviants, and relatively healthy adolescents with minor adjustment problems.*
>
> (Allen and Janowitz, 1964: p. 377)

This statement provides an eloquent description of the range of psychiatric diagnoses and presenting complaints referred by students to the college/university mental health service. Reifler, Liptzin and Fox (1967) note that not all students who present themselves as patients are diagnosed as sick and not all nonpatients are healthy. However, the more acute or more severe the illness, the greater is the probability of the individual's behaviour brining him/her to the eye of the public and to the psychiatrist for evaluation.

Gilbert (1992) notes that in recent national surveys of university and college counselling centres, conducted by Gallagher (1989) and O'Malley et al. (1990), directors have reported that there has been a marked increase in the number of students presenting with more severe psychopathology. The author, by way of explanation, comments that a more diverse cross-section of society is currently attending college/university than at any time in the history of American higher education.

3.3.3 Demographic Variables

The selected demographic variables investigated in the UCT-SHS study are gender, race/population group, race/population group and gender combined, age and language.

3.3.3.1 Gender

This variable is the most commonly reported one in the literature reviewing developed (first world) countries (44 of the 61 samples reported in 43 articles – including one all-male establishment) and developing (third world) countries (three of the six samples reported in four articles) as well as literature forwarded from Southern African universities or technikons (three of the 19 samples reported from five tertiary educational institutions). The most useful indicator to assess the gender-specific profile of mental health service attendees is the male to female (m:f) ratio. Therefore, this discussion will confine itself to addressing the male to female attendance ratios recorded in Table 3.4. In the case of developed (first world) countries, these male to female attendance ratios are further stratified according to ratios in excess of 1,50:1, ratios between 1,00 and 1,50:1 and ratios less than 1,00:1. On the other hand, the gender-specific profile of mental health service utilisation according to usage/utilisation rates per 1 000 students, utilisation ratios (where available) and the mean number of consultations per student is assessed by the individual male and female-specific figures recorded in Table 3.4. which are, for developed (first world) countries, compared to

the values previously recorded for the overall usage/utilisation rate and the overall mean number of consultations, respectively. In the case of developing (third world) countries the individual male and female-specific figures are compared to the corresponding values previously recorded for developed (first world) countries while Southern African countries are compared to the corresponding values previously recorded for developed (first world) and developing (third world) countries, respectively.

This subsection also functions to review the relative frequency (importance) of individual clinical diagnoses (both psychiatric diagnoses and presenting complaints format) for the male or female student attending the college/university mental health service (refer to Table 3.5). The internationally recognised descriptive diagnostic classification system employed by the author to code individual presenting psychiatric diagnoses will be detailed (where available) in Table 3.5 in square brackets in the classification column. These gender-specific findings are substantially reorganised by grouping identical clinical diagnoses (in the form of major diagnostic categories such as affective disorders, adjustment disorders, V-codes, anxiety (neurotic) disorders and other disorders including several separately coded disorders) to provide the material appearing under the individual subheadings.

Table 3.4 Number of attendees, usage/utilisation rate per 1 000 students and number of consultations per patient according to gender of students attending college/university mental health facilities.

Reference	Location	N	Details of sample	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
(a) Developed (first world) countries						
Allen and Janowitz (1964)	University of Massachusetts, USA	N/S	Student attendees from 09/61 to 06/62	N/S	M: 42,0 [0,79] F: 74,0 [1,40] M:F = 0,57:1	N/S
		N/S	Student attendees from 09/62 to 06/63	N/S	M: 50,0 [0,86] F: 71,0 [1,22] M:F = 0,70:1	N/S
		N/S	Student attendees from 09/63 to 06/64	N/S	M: 63,0 [0,81] F: 104,0 [1,33] M:F = 0,61:1	N/S
Alston (1974)	New York University, USA	34	Minority (mainly Black and Hispanic) student attendees from 09/69 to 06/70	M: 18 (52,9%) F: 16 (47,1%) M:F = 1,13:1	N/S	N/S
Boor (1975)	Fort Hays Kansas State College, USA	84[1]	Student attendees from 09/70 to 01/74	M: 36 (42,9%) F: 48 (57,1%) M:F = 0,75:1	N/S	N/S
Braaten and Darling (1961)	Cornell University, USA	639	Student attendees from 07/59 to 06/60	M: 447 (70,0%) F: 192 (30,0%) M:F = 2,33:1	N/S	N/S
Buckle (1972)	Monash University, Australia	130	Student attendees over unspecified 3 year period	M: 74 (56,9%) F: 56 (43,1%) M:F = 1,32:1	N/S	N/S
Craig (1974)	Anonymous Arts College in Baltimore, USA	44	Undergraduate student attendees from 09/70 to 06/71	M: 21 (47,7%) F: 23 (52,3%) M:F = 0,91:1	M: 44,0 [1,02] F: 43,0 [1,00] M:F = 1,02:1	N/S

Reference	Location	N	Details of sample	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
Dann (1964)	University College, Swansea, UK	21	Undergraduate psychology student attendees entering College in 1958/59 and 60	M: 16 (76,2%) F: 5 (23,8%) M:F = 3,20:1	M: 119,7 [-] F: 69,4 [-] M:F = 1,72:1	N/S
		172	Undergraduate non-psychology students attendees entering College in 1958/59 and 60	M: 126 (73,3%) F: 46 (26,7%) M:F = 2,74:1	M: 40,8 [-] F: 45,5 [-] M:F = 0,90:1	N/S
		193	Undergraduate student attendees entering College in 1958, 59 and 60	M: 142 (73,6%) F: 51 (26,4%) M:F = 2,78:1	M: 44,4 [-] F: 46,9 [-] M:F = 0,95:1	N/S
Deutsch and Ellenberg (1973)	New York University's Washington Square Campus, USA	64	Freshman (fresher) student attendees from 09/65 to 06/66	M: 30 (46,9%) F: 34 (53,1%) M:F = 0,88:1	N/S	N/S
Dunn et al. (1980)	College Mental Health Center, Boston, USA	814[2]	Student attendees from 09/75 to 06/77	M: 347 (42,6%) F: 467 (57,4%) M:F = 0,74:1	M: 9,1 [0,73] F: 17,1 [1,38] M:F = 0,53:1	M: 9,1 F: 7,4 M:F = 1,23:1
Frank and Kirk (1976)	University of California, Berkeley, USA	720	Undergraduate student attendees at the Campus Counseling Center entering University in 1966[3]	M: 401 (55,7%) F: 319 (44,3%) M:F = 1,26:1	M: 49,8 [0,98] F: 52,6 [1,04] M:F = 0,95:1	N/S
		349	Undergraduate student attendees at the Psychiatric Service of the SHS entering University in 1966[4]	M: 183 (52,4%) F: 166 (47,6%) M:F = 1,10:1	M: 20,8 [0,91] F: 25,8 [1,13] M:F = 0,81:1	N/S
		934	Undergraduate student attendees at either the Campus Counseling Center or Psychiatric Service of the SHS entering University in 1966	M: 502 (53,7%) F: 432 (46,3%) M:F = 1,16:1	M: 61,2 [0,94] F: 70,6 [1,09] M:F = 0,87:1	N/S
Friedman and Coons (1969)	Indiana University, USA	647	Student attendees from 09/66 to 06/67	M: 336 (51,9%) F: 311 (48,1%) M:F = 1,08:1	N/S	M: 2,7 F: 2,9 M:F = 0,93:1
Gibbs (1975)	Stanford University, USA	87	Black student attendees at Cowell Health Center from 09/69 to 06/72	M:41 (47,1%) F:46 (52,9%) M:F = 0,89:1	N/S	M: 4,00 F: 5,43 M:F = 0,74:1
		3 517	Non-Black student attendees at Cowell Health Center from 09/69 to 06/72	M: 1 975 (56,2%) F: 1 542 (43,8%) M:F = 1,28:1	N/S	M: 4,37 F: 4,17 M:F = 1,04:1
		3 604	Student attendees at Cowell Health Center from 09/69 to 06/72	M: 2 016 (55,9%) F: 1 588 (44,1%) M:F = 1,27:1	N/S	N/S
Hersch and Lathan (1985)	University of Massachusetts at Amherst, USA	100	Student attendees at Mental Walk-In Clinic during unspecified period of fall 1983	M: 41 (47,1%) F: 59 (59,0%) M:F = 0,69:1	N/S	N/S
Hersch et al. (1983)	University of Massachusetts at Amherst, USA	200	Student attendees from 10/80 to 05/81	M: 78 (39,0%) F: 122 (61,0%) M:F = 0,64:1	N/S	N/S
Horenstein (1976)	University of Kansas, USA	122	Student attendees from 12/70 to 05/72	M: 67 (54,9%) F: 55 (45,1%) M:F = 1,22:1	N/S	N/S
Jenkins et al. (1986)	Anonymous large midwestern university, USA	414[5]	Student attendees from 09/81 to 06/82	M: 149 (36,0%) F: 265 (64,0%) M:F = 0,56:1	N/S	N/S

Reference	Location	N	Details of sample	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
Jones (1972)	University of Melbourne, Australia	250	Student attendees from 01/66 to 12/71	M: 162 (64,8%) F: 88 (35,2%) M:F = 1,84:1	N/S	N/S
Kidd and Caldbeck-Meenan (1966)	University of Edinburgh, UK	172	Student attendees at all psychiatric services at the University, hospitals and private sector of Edinburgh and S-E Scotland during an unspecified one year period	M: 88 (51,2%) F: 84 (48,8%) M:F = 1,05:1	M: 89,7 [0,81] F: 146,3 [1,32] M:F = 0,61:1	N/S
	Queen's University of Belfast, UK	100	Student attendees at all psychiatric services at the University, hospitals and private sector of Belfast and N Ireland during an unspecified one year period	M: 65 (65,0%) F: 35 (35,0%) M:F = 1,86:1	M: 90,8 [0,88] F: 135,1 [1,32] M:F = 0,67:1	N/S
Lloyd and Gartrell (1981)	University of Texas Medical School, USA	N/S	Student attendees from 09/77 to 06/78	N/S	M: 38,0 [-] F: 117,0 [-] M:F = 0,32:1	N/S
Maclay (1967)	Birmingham University, UK	146	Student attendees from 01/64 to 12/65	M: 104 (71,2%) F: 42 (28,8%) M:F = 2,48:1	N/S	N/S
Reifler et al. (1967)	University of North Carolina at Chapel Hill, USA	125	Student attendees from 06/56 to 05/57		M: 16,0[6] [-] F: 22,0[6] [-] M:F = 0,73:1	N/S
		550	Student attendees from 06/65 to 05/66		M: 42,0[6] [-] F: 56,0[6] [-] M:F = 0,75:1	N/S
Reinhold (1973)	University of Pennsylvania, USA	171	Undergraduate student attendees at the University Counseling Service entering University in 1964[7]	M: 124 (72,5%) F: 47 (27,5%) M:F = 2,64:1	M: 34,8 [1,05] F: 29,4 [0,89] M:F = 1,18:1	N/S
		116	Undergraduate student attendees at the SHS Psychiatric Clinic entering University in 1964[7]	M: 61 (52,6%) F: 55 (47,4%) M:F = 1,11:1	M: 17,1 [0,76] F: 34,4 [1,53] M:F = 0,50:1	N/S
		252	Undergraduate student attendees at either the University Counseling Service or SHS Psychiatric Clinic entering University in 1964[7]	M: 167 (66,3%) F: 85 (33,7%) M:F = 1,96:1	M: 46,9 [0,96] F: 53,1 [1,09] M:F = 0,88:1	N/S
Rosecan et al. (1992)	Georgetown University, USA	48[8]	Undergraduate student admissions to inpatient psychiatric unit from 01/87 to 12/89	M: 24 (50,0%) F: 24 (50,0%) M:F = 1,00:1	N/S	N/S
Schwarz (1964)	University of British Columbia, Canada	206	Student attendees from 09/62 to 05/63	M: 113 (54,9%) F: 93 (45,1%) M:F = 1,22:1	M: 12,0 [0,80] F: 22,1 [1,47] M:F = 0,54:1	N/S
Selzer (1960)	University of Michigan, USA	506	Student attendees from 07/56 to 06/58	M: 380 (75,1%) F: 126 (24,9%) M:F = 3,02:1	N/S	N/S
Sharp and Marra (1971)	University of Wyoming, USA	594	Student attendees from 07/67 to 06/68	M: 341 (57,4%) F: 253 (42,6%) M:F = 1,35:1	N/S	N/S
Stangler and Printz (1980)	University of Washington, USA	500	Student attendees over unspecified 5 month period	M: 182 (36,4%) F: 318 (63,6%) M:F = 0,57:1	N/S	N/S

Reference	Location	N	Details of sample	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
U'ren et al. (1973)	US Military Academy at Westpoint, USA	119	Cadet attendees from 07/70 to 06/71	M: 119 (100,0%) F: 0 (0,0%) M:F = N/A	M: 31,8 [N/A] F: 0,0 [N/A] M:F = N/A	M: 3,6 F: N/A M:F = N/A
Walters (1970)	University of Illinois, USA	4 547	Student attendees from 09/58 to 06/68	M: 2 880 (63,3%) F: 1 667 (36,7%) M:F = 1,73:1	M: 16,5 [0,76] F: 22,3 [1,02] M:F = 0,74:1	N/S
Winer and Dorus (1972)	University of Chicago, USA	273	First, fourth and fifth year undergraduate student attendees from 09/68 to 06/70	M: 143 (52,4%) F: 130 (47,6%) M:F = 1,10:1	N/S	N/S
Wogan and Amdur (1974)	University of Connecticut, USA	188[9]	Student attendees from 09/64 to 06/65	M: 92 (48,9%) F: 96 (51,1%) M:F = 0,96:1	M: 33,0 [0,92] F: 39,0 [1,08] M:F = 0,85:1	N/S
		200[10]	Student attendees from 09/71 to 06/72	M: 86 F: 114 (57,0%) M:F = 0,75:1	M: 67,0 [0,74] F: 122,0 [1,36] M:F = 0,55:1	N/S
(b) Developing (third world) countries						
German and Arya (1969)	Makerere University College, Uganda	121	Student attendees from 10/66 to 06/67	M: 113 (93,4%) F: 8 (6,6%) M:F = 14,10:1	M: 95,7 [1,07] F: 47,1 [0,53] M:F = 2,03:1	N/S
Ovuga et al. (1996)	Makerere University, Uganda	24[11]	Undergraduate student attendees entering University in 1992	M: 22 (91,7%) F: 2 (8,3%) M:F = 11,00:1	N/S	N/S
Wig et al. (1971)	Panjab University, India	68	Student attendees from 09/66 to 06/67	M: 57 (83,8%) F: 11 (16,2%) M:F = 5,13:1	N/S	N/S
(c) Southern African countries						
Mupunga (1997)	University of Zimbabwe	473	Student attendees from 01-12/96	M: 283 (59,8%) F: 90(40,2%)[12] M:F = 1,49:1	N/S	N/S
Naidoo (1997)	University of the Western Cape	1 004[13]	Student attendees from 01-12/95	M: 319 (35,5%) F: 579 (64,5%) Missing: 106 M:F = 0,55:1	M: 46,3 [N/A][14] F 74,0 [N/A][14] Missing: 106 M:F = 0,63:1	N/S
		722[14]	Student attendees from 01-12/96	M: 240 (36,3%) F: 422 (63,7%) Missing: 60 M:F = 0,57:1	M: 40,6 [N/A][16] F: 57,8 [N/A][16] Missing: 60 M:F = 0,70:1	N/S

Footnotes

1. The figures quoted above represent a randomly selected sample of 84 cases from the entire case load (exact number of cases are not mentioned in the article) of the Psychological Service Center during the 3+ year study period.

2. The entire case load of the College Mental Health Center for 1975 to 1977 was 847 cases but the authors excluded 33 cases due to various clerical reasons to leave a sample of 814 cases for which nearly complete data were available. The authors note that when the gender-specific attendance figures were compared to the composition of the local tertiary institution student bodies (58 per cent male students and 42 per cent female students), a very highly significant difference regarding female attendees at the College Mental Health Center is noted ($\chi^2 = 77,43$; $p < 0,001$).

3. The Campus Counseling Center focused on clinical vocational-educational counselling, i.e. assisting students to arrive at realistic and potentially satisfying educational and vocational objectives as well as facilitating their personal growth from a developmental frame of reference.

4. The Psychiatric Service had a therapy orientation and focused on assisting students with self-designated personal problems on a relatively short-term basis.

5. The entire case load of the counselling centre for 1981/82 was 469 cases but the authors excluded 55 cases because of extraneous factors which affected the duration of counselling (viz. number of interviews/consultations) – which is the primary focus of the article to leave a sample of 414 cases.

6. Exact figures are not provided in the script as this information is represented by the authors in the form of a graph.

7. The author notes that the population defined and sample strata studied were initially controlled for concurrent and uninterrupted membership of the University of Pennsylvania. Those individuals who, for whatever reasons, were temporarily or permanently separated from the University were not represented. This restriction of the population studied may have resulted in a conservative estimate (under-representation) of the utilisation of this university mental health service.

8. Although there were 48 separate admissions of Georgetown University students to the mental healthcare unit during the 3 year study period, one student was admitted twice in 1989 and another was admitted twice, once in 1987 and again in 1989. Therefore, the remaining 44 admissions correspond with individual students hospitalised one time at Georgetown University Hospital. The original figure of 48 admissions has been employed here in the absence of modified figures.

9. The entire case load of the Student Mental Health Service for 1964/65 was 368 cases but the authors excluded 180 cases which, inter alia, had been seen in previous years or were administrative referrals to leave a sample of 188 cases.

10. The entire case load of the Student Mental Health Service for 1971/72 was 1 052 cases but the authors employed a stratified sample of 200 cases divided proportionately by the month in which the patient applied to the clinic for the first time.

11. The attendance figures quoted above are derived from a sample of 619 (ex a total of 2 140) newly enrolled students who voluntarily completed a self-administered questionnaire (the Umzimkulu Suicide Proneness Inventory – USPI) during the first two weeks of their admission to the University. A total of 50 students, whose gender-specific breakdown is not described in the article, attended counselling services at the University Hospital at Makerere University, during the 3 year study period.

12. The student body of the University of Zimbabwe consists of a predominantly male student population (no figures provided by the correspondent) which suggests that there is a potentially significant overrepresentation of female students amongst Student Health Service attendees with psychiatric diagnoses.

13. The entire case load of the Centre for Student Counselling for 1995 was 1 280 cases but the correspondent excluded 276 cases due to the lack of client checklists (completed voluntarily) to leave a sample of 1 004 cases for which completed checklists were available.

14. Due to the high number of missing responses recorded (106 ex 1 004 or 10,6 per cent of attendees), it is not possible to calculate utilisation ratios for male or female student attendees.

15. The entire case load of the Centre for Student Counselling for 1996 was 1 276 cases but the correspondent excluded 554 cases due to the lack of client checklists (completed voluntarily) to leave a sample of 722 cases for which completed checklists were available.

16. Due to the high number of missing responses recorded (60 ex 722 or 8,3 per cent of attendees), it is not possible to calculate utilisation ratios for male or female student attendees.

Abbreviations appearing in Table 3.4:
N/S = Result not specified.
N/A = Result not applicable.
M = Male students.
F = Female students.

Table 3.5 Clinical diagnoses or presenting complaints for students attending college/university mental health facilities stratified by gender.

Reference	Location	N	Details of sample	Classification	Diagnoses/presenting complaints	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
(a) Developed (first world) countries								
Buckle (1972)	Monash University, Australia	130 M: 74 F: 56 M:F= 1,32:1	Student attendees over unspecified 3 year period	Psychiatric diagnoses	1. Depression	M: 16 (21,6%) F: 19 (33,9%) M:F = 0,84:1	N/S	N/S
					2. Personality disorder	M: 19 (25,7%) F: 15 (26,8%) M:F = 1,27:1		
					3. Anxiety	M: 19 (25,7%) F: 6 (10,7%) M:F = 3,17:1		
					4. Sexual	M: 10 (13,5%) F: 6 (10,7%) M:F = 1,67:1		
					5. Other neuroses	M: 5 (6,8%) F: 2 (3,6%) M:F = 2,50:1		
Dann (1964)	University College, Swansea, UK	193 M: 142 F: 51 M:F= 2,78:1	Undergraduate psychology and non-psychology student attendees entering College in 1958, 59 and 60[1]	Psychiatric diagnoses	1. Neurotic	M: 75 (52,8%) F: 19 (37,3%) M:F = 3,95:1	M: 23,5 [-] F: 17,5 [-] M:F = 1,34:1	N/S
					2. Psychosomatic	M: 49 (34,5%) F: 20 (39,2%) M:F = 2,45:1	M: 15,3 [-] F: 18,4 [-] M:F = 0,83:1	
					3. Psychotic	M: 12 (8,5%) F: 7 (13,7%) M:F = 1,71:1	M: 3,8 [-] F: 6,4 [-] M:F = 0,59:1	
					4. Personality defect	M: 6 (4,2%) F: 5 (9,8%) M:F = 1,20:1	M: 1,9 [-] F: 4,6 [-] M:F = 0,41:1	

Reference	Location	N	Details of sample	Classification	Diagnoses/presenting complaints	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
Friedman and Coons (1969)	Indiana University, USA	647[2] M: 336 F: 311 M:F= 1,08:1	Student attendees from 09/66 to 06/67	Psychiatric diagnoses	1. Adjustment reaction	M: 81 (24,5%) F: 87 (28,7%) M:F = 0,93:1	N/S	N/S
					2. Passive-aggressive personality[3]	M: 43 (13,0%) F: 50 (16,5%) M:F = 0,86:1		
					3. Schizoid personality	M: 54 (16,3%) F: 25 (8,3%) M:F = 2,16:1		
					4. Depression	M: 20 (6,0%) F: 10 (3,3%) M:F = 2,00:1		
					5. Anxiety	M: 15 (4,5%) F: 7 (2,3%) M:F = 2,14:1		
				Presenting complaints	1. Academic problems	M: 61 (18,4%) F: 30 (9,9%) M:F = 2,03:1	N/S	N/S
					2. Depression	M: 41 (12,4%) F: 48 (15,8%) M:F = 0,85:1		
					3. Anxiety	M: 39 (11,8%) F: 41 (13,5%) M:F = 0,95:1		
					4. Somatic and psycho-physiological symptoms	M: N/S F: N/S M:F = N/S		
					5. Heterosexual inter-personal relationship problems	M: N/S F: N/S M:F = N/S		
					6. General interpersonal relationship problems	M: N/S F: N/S M:F = N/S		
					7. Homosexuality	M: N/S F: N/S M:F = N/S		

Reference	Location	N	Details of sample	Classification	Diagnoses/presenting complaints	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
Hersch et al. (1983)	University of Massachusetts at Amherst, USA	200 M: 78 F: 122 M:F= 0,64:1	Student attendees from 10/80 to 05/81	Presenting complaints	1. Phase of life problem	M: 27 (34,6%) F: 45 (36,9%) M:F = 0,60- :1	N/S	N/S
					2. Adjustment disorder with depressed mood	M: 8 (10,3%) F: 21 (17,2%) M:F = 0,38:1		
					3. Adjustment disorder with mixed emotional features	M: 9 (11,5%) F: 18 (14,8%) M:F = 0,50:1		
					4. Other interpersonal problem	M: 7 (9,0%) F: 11 (9,0%) M:F = 0,64:1		
					5. Academic problem	M: 9 (11,5%) F: 4 (3,3%) M:F = 2,25:1		
Jones (1972)	University of Melbourne, Australia	250 M: 162 F: 88 M:F= 1,84:1	Student attendees from 01/66 to 12/71	Psychiatric diagnoses	1. Depression	M: 76 (46,9%) F: 56 (63,6%) M:F = 1,36:1	N/S	N/S
					2. Anxiety	M: 30 (18,5%) F: 18 (20,5%) M:F = 1,67:1		
					3. Sexual problems	M: 26 (16,1%) F: 1 (1,1%) M:F = 26,00:1		
					4. Schizophrenia	M: 12 (7,4%) F: 1 (1,1%) M:F = 12,00:1		
					5. Personality disorder	7 (2,8%) M: 3 (1,9%) F: 4 (4,6%) M:F = 0,75:1		
				Presenting complains	1. Study	93 (27,6%) M: 67 (28,9%) F: 26 (24.5%) M:F = 2,58:1	N/S	N/S

Reference	Location	N	Details of sample	Classification	Diagnoses/presenting complaints	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
					2. Emotional and sexual[4]	66 (19,6%) M: 45 (19,4%) F: 21 (20,0%) M:F = 2,14:1		
					3. Parental	M: 34 (14,7%) F: 23 (21,9%) M:F = 1,48:1		
					4. Interpersonal relations	M: 36 (15,5%) F: 16 (15,2%) M:F = 2,25:1		
					5. Ethnic	M: 9 (3,9%) F: 3 (2,9%) M:F = 3,00:1		
Kidd and Caldbeck-Meenan (1966)	University of Edinburgh, UK	172 M: 88 F: 84 M:F= 1,05:1	Student attendees at all psychiatric services at the University, hospitals and private sector of Edinburgh and S-E Scotland during an unspecified one year period	Modified psychiatric diagnoses[5]	1. Neurosis	M: 24 (27,3%) F: 33 (39,3%) M:F = 0,73:1	M: 24,5 [0,67] F: 57,5 [1,57] M:F = 0,43:1	N/S
					2. Psycho-physiological reactions and psychosomatic illness	M: 23 (26,1%) F: 22 (26,2%) M:F = 1,05:1	M: 23,4 [0,81] F: 38,3 [1,33] M:F = 0,61:1	
					3. Character disorder	M: 9 (10,2%) F: 2 (2,4%) M:F = 4,50:1	M: 9,2 [1,30] F: 3,5 [0,49] M:F = 2,63:1	
					4. Psychosis	M: 6 (6,8%) F: 2 (2,4%) M:F = 3,00:1	M: 6,1 [1,20] F: 3,5 [0,69] M:F = 1,74:1	
					5. Other	M: 26 (29,7%) F: 25 (29,8%) M:F = 1,04:1	M: 26,5 [0,81] F: 43,6 [1,33] M:F = 0,61:1	
	Queen's University of Belfast, UK	100 M: 65 F: 35 M:F= 1,86:1	Student attendees at all psychiatric services at the University, hospitals and private sector of Belfast and	Modified psychiatric diagnoses[5]	1. Psycho-physiological reactions and psychosomatic illness	M: 29 (44,6%) F: 10 (28,6%) M:F = 2,90:1	M: 40,5 [1,01] F: 38,6 [0,97] M:F = 1,05:1	N/S
					2. Neurosis	M: 5 (7,7%) F: 13 (37,1%) M:F = 0,38:1	M: 7,0 [0,38] F: 50,2 [1,26] M:F = 0,14:1	

Reference	Location	N	Details of sample	Classification	Diagnoses/presenting complaints	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
			N Ireland during an unspecified one year period		3. Character disorder	M: 6 (9,2%) F: 1 (2,9%) M:F = 6,00:1	M: 8,4 [1,17] F: 3,9 [0,54] M:F = 2,15:1	
					4. Psychosis	M: 2 (3,1%) F: 0 (0,0%) M:F = N/A	M: 2,8 [1,33] F: 0,0 [0,00] M:F = N/A	
					5. Other	M: 24 (36,9%) F: 10 (28,6%) M:F = 2,40:1	M: 33,5 [0,96] F: 38,6 [1,11] M:F = 0,87:1	
Selzer (1960)	University of Michigan, USA	506 M: 380 F: 126 M:F= 3,02:1	Student attendees from 07/56 to 12/58	Psychiatric diagnoses [DSM I]	1. Psychoneurosis	M: 126 (33,2%) F: 54 (42,9%) M:F = 2,33:1	N/S	N/S
					2. Personality disorder	M: 100 (26,3%) F: 24 (19,0%) M:F = 4,17:1		
					3. Schizophrenia	M: 82 (21,6%) F: 28 (22,2%) M:F = 2,93:1		
					4. Adjustment problem	M: 33 (8,7%) F: 9 (7,1%) M:F = 3,67:1		
					5. Other	M: 39 (10,3%) F: 11 (8,7%) M:F = 3,55:1		
Stangler and Printz (1980)	University of Washington, USA	500 M: 112 F: 251 M:F= 0,45:1	Student attendees over unspecified 5 month period	Psychiatric diagnoses [DSM III] (Axis I diagnoses)	1. Dysthymic disorder	M: 20 (11,0%) F: 59 (18,6%) M:F = 0,34:1	N/S	N/S
					2. Adjustment disorder with depressed mood	M: 25 (13,7%) F: 35 (11,0%) M:F = 0,71:1		
					3. Adjustment disorder with mixed emotional features	M: 16 (8,8%) F: 37 (11,6%) M:F = 0,43:1		

Reference	Location	N	Details of sample	Classification	Diagnoses/presenting complaints	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
					4. Psychological factors affecting physical condition	M: 13 (7,1%) F: 23 (7,2%) M:F = 0,57:1		
					5. Major depression	M: 14 (7,7%) F: 19 (6,0%) M:F = 0,74:1		
					6. Marital problem	M: 7 (3,8%) F: 20 (6,3%) M:F = 0,35:1		
					7. Other interpersonal problem	M: 6 (3,3%) F: 13 (4,02%) M:F = 0,46:1		
					8. Bulimia	M: 2 (1,1%) F: 17 (5,3%) M:F = 0,12:1		
					9. Identity disorder	M: 2 (1,1%) F: 17 (5,3%) M:F = 0,12:1		
					10. Adjustment disorder with anxious mood	M: 7 (3,8%) F: 11 (3,5%) M:F = 0,64:1		
(b) Developing (third world) countries								
NO ENTRIES								
(c) Southern African countries								
Germond (1997)	Medical University of Southern Africa (MEDUNSA)	142[6] M: 68 F: 74 M:F= 0,92:1	Student consultations (rather than attendees) from 01-12/96	Presenting complaints	1. Feeling anxious, tense, nervous	M: 34 (49,3%) F: 29 (39,2%) M:F = 1,17:1	N/S	N/S
					2. Feeling depressed	M: 13 (18,8%) F: 29 (39,2%) M:F = 0,45:1		
					3. Disturbance of sleep	M: 12 (17,4%) F: 5 (6,8%) M:F = 2,40:1		

Reference	Location	N	Details of sample	Classification	Diagnoses/presenting complaints	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
					4. Acute stress	M: 3 (4,3%) F: 5 (6,8%) M:F = 0,60:1		
					5. Neurasthenia (suminage)	M: 1 (1,4%) F: 6 (8,1%) M:F = 0,17:1		
					6. Inhibition/loss of sexual drive or fulfilment	M: 5 (7,2%) F: 0 (0,0%) M:F = N/A		

Footnotes

1. As the aim of the article was to determine whether more psychology students suffer from psychiatric disorders than other students, the nature and distribution of psychiatric disorder (as measured by the number of students visiting the College Medical Officer for psychiatric disorders) between psychology and non-psychology students was assessed. Therefore, the author documents separate comparable results, by gender and/or category of psychiatric disorder, for psychology and non-psychology students which are subjected to statistical analysis. As the number of psychology students visiting the College Medical Officer for psychiatric disorders was comparatively small (N=21) and as the specific aim of the UCT-SHS study is not to compare psychology students to other students, the separate attendance figures documented by the author have been combined into the results listed in Table 3.5.

2. Although the entire case load of the Psychiatric Division for 1966/67 was 647 cases, the authors excluded 13 cases for diagnostic purposes due to unavailable data to leave a total of 634 students (331 males and 303 females). Therefore, this latter figure has been employed as the de facto total when percentages have been calculated for psychiatric diagnoses or presenting complaints.

3. The authors state that the diagnosis of passive-aggressive personality is not suggestive of the presence of a considerable amount of psychopathology, although this disturbance may be debilitating and possibly chronic.

4. "Emotional and sexual" refers to male-female or male-male pair bond problems of a sexual nature. All those presenting directly with abnormal physical sexual behaviour are included in this category, but some severe emotional factors of a sexual type are also included. These are mainly severe reactions following an unhappy sexual affair, and they all occurred, with one exception, in women. There were also some individuals whose prime diagnosis was anxiety or depression, but who had sexual problems which apparently caused them to present. These differences explain why the figures for sexual factors differ between the psychiatric diagnoses and the presenting complaints formats adopted by the author.

5. The classification employed in this study allowed scope for recognition of both formal psychiatric illness and "conspicuous psychiatric morbidity", where the doctor does not make a specific psychiatric diagnosis but appreciates the presence of psychological symptoms and signs and of physical conditions in which psychological factors are known to play a part.

6. The correspondent notes that quite a number of emotional problems presented with pain in various areas and sometimes they were recorded as "chest pain", "headache", "abdominal pain", "low back pain", or "syncope" instead of psychological aetiology of the pain or medical disorder. Therefore, the psychiatric diagnoses recorded are clearly mental or emotional categories (rather than these psychosomatic/psychophysiological conditions outlined above) and relate to the number of consultations required by patients rather than the actual number of patients, per se, seen at the Campus Health Service. This consultation-specific analysis is a departure from the patient-specific analysis employed in all the other studies reported in this section. The correspondent notes that students presenting with recognised psychiatric diagnoses (as outlined in Table 3.5) account for only 2,7 per cent of total consultations.

(a) Patient-specific data

(i) Country and objective-specific outline

A: Developed (first world) countries

– Attendees (Objective 1)

For attendee (Objective 1)-specific data there is a definite time-specific trend spanning the 1950's to the 1980's which is characterised by an increasing proportion of female – relative to male – students seeking evaluation and/or therapeutic intervention at the various college/university mental health services. As subsequently explained, this phenomenon is probably indicative of a changing social order which empowered an increasing number of females to register at colleges and universities in developed (first world) countries rather than necessarily reflecting an increasing incidence of psychological or psychiatric complaints affecting female students attending these tertiary educational institutions. Therefore, this subdivision will also highlight relevant chronological details relating to male to female attendance ratio ranges when it documents the gender-specific attendance of college/university mental health services reported in the literature.

It is noteworthy that 10 of the 11 samples recording male to female student attendance ratios greater than 1,50:1 (with the exception of Jones, 1972) involved students attending the mental health services of their respective colleges/universities before 1970. In fact, six of these 11 samples involved student mental health service attendees prior to 1965. This finding is probably due to a male predominance of the total student community served by the respective mental health services. This supposition is confirmed by comparing these male to female attendance ratios with their corresponding (where available) male to female usage/utilisation ratios where five of these seven values (with the exception of Dann, 1964, psychology student cohort and Reinhold, 1973, University of Pennsylvania Counseling Service attendees) record a higher female usage/utilisation rate.

Furthermore, 12 of the 16 samples recording male to female student attendance ratios between 1,00:1 and 1,50:1 (with the exception of Kidd and Caldbeck-Meenan, 1966, University of Edinburgh cohort and Rosecan et al., 1992) involved students attending the mental health services of their respective colleges/universities between 1966 and 1972. This finding is probably due to a lingering male predominance of the total student community served by the respective mental health services although it is likely that more female students were attending colleges and universities by the early 1970's than during the late 1950's and 1960's to more closely reflect demographic trends existing in the broader community. This hypothesis is also confirmed by comparing these male to female attendance ratios with their corresponding (where available) male to female usage/utilisation ratios where all of these values record a higher female

usage/utilisation rate – although the difference between these values is less marked than that recorded for male to female attendance ratios greater than 1,50:1 (see above).

On the other hand, five of the 11 samples recording male to female student attendance ratios less than 1,00:1 (incorporating the five lowest ratios of less than 0,75:1) involved students attending the mental health services of their respective colleges/universities after 1972. In fact, eight of these 11 samples (with the exception of Deutsch and Ellenbogen, 1973, Gibbs, 1975, Black student cohort and Wogan and Amdur, 1974, attendees from 09/64 to 06/65) involved student mental health service attendees during or after 1970. This finding is probably indicative of the near equal distribution of male and female students within the total student community served by the respective mental health services after the mid 1970's to reflect demographic trends existing in the broader community. This premise is also largely confirmed by comparing these male to female attendance ratios with their corresponding (where available) male to female usage/utilisation ratios as all but one (Craig, 1974) record a higher female usage/utilisation rate – although the difference between these values is minimal compared to that recorded for male to female attendance ratios greater than 1,50:1 or between 1,00:1 and 1,50:1 (see above).

In conclusion, a predominance in male students attending the mental health services of their respective colleges/universities is reported in 26 of the 38 (68,4 per cent) samples where attendance figures have been provided while female students predominate in only 11 (28,9 per cent) samples with parity being recorded in one (2,6 per cent) sample. This trend is time-specific insofar as the male predominance was greatest in the late 1950's and early-mid 1960's, less predominant in the late 1960's and early 1970's and virtually absent in the mid 1970's and 1980's onwards. This finding is related to the composition of the total student community rather than factors affecting usage of these facilities by female students as they actually utilise the mental health service more than their male peers in 20 of the 23 (87,0 per cent) samples where usage/utilisation rates have been provided by the authors.

– Usage/utilisation rates (Objective 3)

For usage/utilisation rate (Objective 3)-specific data it is highly noteworthy that only three of the 23 (13,0 per cent) samples in which usage/utilisation rates are reported, recorded male to female student ratios greater than 1,00:1 (Dann, 1964, documented a value of 1,72:1 for undergraduate psychology student attendees). All three studies involved students attending the mental health services of their respective colleges/universities prior to 1975. This finding could be due to a lingering male predominance of the total student community served by these respective mental health services together with a resultant female reticence, due to shyness, to use these facilities. Of the remaining 20 samples, 13 (65,0 per cent) reported a male to female ratio less than 0,80:1 (Lloyd and Gartrell, 1981, recorded a value of 0,32:1 for medical students). These findings are, on the other hand, highly suggestive of an increased female likelihood to present with mental disorders. (The rationale behind this hypothesis is discussed, below, in the accompanying explanation subdivision.)

Where overall usage/utilisation rates together with gender-specific usage/utilisation rates are recorded in the literature reviewed, it has been possible to insert additional utilisation ratios (Bridges-Webb et al., 1992) to the basic results obtained from the original article already documented in Table 3.4. These ratios are calculated by dividing the male and female student usage/utilisation rates by the overall usage/utilisation rate. They are displayed in square brackets adjacent to the documented usage/utilisation rates. Fully 15 of the 17 (88,2 per cent) samples which included the requisite data to determine utilisation ratios demonstrate that female students recorded higher figures than their male student peers. Only Craig (1974) and Reinhold (1973) for University of Pennsylvania Counseling Service attendees reported male utilisation ratios of 1,02 and 1,05, respectively. Therefore, these results imply a definite overrepresentation of female student attendees accompanied by an underrepresentation of male student attendees in developed (first world) college/university mental health service presentations.

The cross-references that are included in the following two paragraphs comparing male and female usage/utilisation rate ranges to the corresponding overall usage/utilisation rate ranges (as well as each other) serve to further contextualise these gender-specific results. This comparison, which complements those preceding it has also, to a lesser extent, been included in the corresponding subdivision detailing results relating to the academic variable of faculty.

It can be observed that only one of the 23 (4,3 per cent) samples in which the usage/utilisation rate for male students is reported, recorded a usage/utilisation rate greater than 100 attendees per 1 000 students. (This figure is much less than that previously recorded for the overall usage/utilisation rate where five (12,3 per cent) samples exceeded this value.) A further five (21,7 per cent) of the samples accounted for usage/utilisation rates for male students between 60 and 100 attendees per 1 000 students with three (13,0 per cent) recording rates between 60 and 80 attendees per 1 000 students. (These figures are also slightly less than those previously recorded for the overall usage/utilisation rate where 12 (30,0 per cent) and six (15,0 per cent) samples respectively, occupied these ranges.) The greatest number of samples (12 or 52,2 per cent) reported usage/utilisation rates between 20 and 60 attendees per 1 000 students with eight (34,8 per cent) recording rates between 40 and 60 attendees per 1 000 students. (These figures are slightly greater than those previously recorded for the overall usage/utilisation rate where 17 (42,5 per cent) and seven (17,5 per cent), respectively occupied these ranges.) Therefore between 20 and 60 (especially 40 and 60) would appear to represent the median range of male student attendance at the mental health service with the preceding six samples corresponding to the upper range of values (greater than 60) and those mentioned below corresponding to the lower range (less than 20). (This median range largely coincides with that previously recorded for the overall usage/utilisation rate.) The remaining five (21,7 per cent) samples recorded usage/utilisation rates less than 20 attendees per 1 000 students. (This figure is also slightly greater than that previously recorded for the overall usage/utilisation rate where seven (17,5 per cent) samples were less than this value.)

Likewise, it can be discerned that five of the 23 (21,7 per cent) samples in which the usage/utilisation rate for female students is reported, recorded a usage/utilisation rate greater than 100 attendees per 1 000 students. (This figure, unlike that of male student attendees, is much greater than that previously recorded for the overall usage/utilisation rate – refer to preceding paragraph for details.) A further four (17,4 per cent) of the samples accounted for usage/utilisation rates for female students between 60 and 100 attendees per 1 000 students with all four recording rates between 60 and 80 attendees per 1 000 students. (The former figure, like that of male student attendees, is somewhat lower than that previously recorded for the overall usage/utilisation rate while the latter figure, unlike that of male student attendees, is slightly greater than that previously recorded for the overall usage/utilisation rate.) The greatest number of samples (13 or 56,5 per cent) reported usage/utilisation rates between 20 and 60 attendees per 1 000 students – which is in agreement with the situation previously documented for male student attendees – with seven (30,4 per cent) recording rates between 20 and 40 attendees per 1 000 students. (These figures are somewhat greater than those previously recorded for the overall usage/utilisation rate.) Therefore between 20 and 60 (especially 20 and 40) would appear to represent the median range of female student attendance (as well as male student attendance) at the mental health service with the preceding nine samples corresponding to the upper range of values (greater than 60) and those mentioned below corresponding to the lower range (less than 20). (This median range coincides with that previously recorded for the overall usage/utilisation rate.) The remaining one (4,3 per cent) sample recorded a usage/utilisation rate less than 20,0 attendees per 1 000 students. (This figure, unlike that of male student attendees, is much lower than that previously recorded for the overall usage/utilisation rate.)

– Mean number of consultations (Objective 4)

For mean number of consultation (Objective 4)-specific data it can be observed that two of the four (50,0 per cent) samples in which the mean number of consultations is reported, recorded a male to female student ratio greater than 1,00:1 (Dunn et al., 1980, documented a value of 1,23:1). Consequently, the two remaining samples reported male to female ratios less than 1,00:1 (Gibbs, 1975, recorded a value of 0,74:1 for Black student attendees).

Only one of the four (25,0 per cent) samples in which the mean number of male consultations is reported, recorded greater than six consultations per student (Dunn et al., 1980). The remaining three (75,0 per cent) samples accounted for less than six consultations per student with two (50,0 per cent) recording four to six consultations per student. The same pattern emerges for female student attendees although their corresponding figures are, with the exception of Dunn et al. (1980), higher.

[The commentary appearing in the second paragraph of section 3.3.2.1(a)(i) (Overall student attendees) outlining conditions likely to affect the majority of developed (first world) college/university mental health services should be considered when these gender-specific findings are compared to those detailed for developing (third world) and Southern African countries.]

B: Developing (third world) countries

– Attendees (Objective 1)

For attendee (Objective 1)-specific data it is highly noteworthy that all three samples recorded male to female student attendance ratios greater than 5,00:1. This finding of grossly elevated male to female student attendance ratios compared to developed (first world) countries is most probably due to an overwhelming male predominance of the total student community served by the respective mental health service. This supposition is largely confirmed by comparing these male to female attendance ratios with the corresponding male to female usage/utilisation ratio obtained by German and Arya (1969) as it records a substantially lower male predominance for the usage/utilisation rate.

– Usage/utilisation rates (Objective 3)

For usage/utilisation rate (Objective 3)-specific data only one sample reported a usage/utilisation rate for male or female students (German and Arya, 1969, at Makerere University College, Uganda) at 95,7 and 47,1 attendees per 1 000 students, respectively. These figures (together with the male to female student ratio and the respective utilisation ratios), therefore, demonstrate a male predisposition to attend the mental health service which is in direct contrast to the trend emerging from developed (first world) countries, although it is difficult to contextualise this situation from the results of only one study. However, cultural factors relating to female modesty may play a role in this phenomenon.

– Mean number of consultations (Objective 4)

For mean number of consultation (Objective 4)-specific data no sample reported the gender-specific mean number of consultations.

[The commentary appearing in the second paragraph of section 3.3.2.1(b)(i) (Overall student attendees) outlining conditions likely to affect the majority of developing (third world) college/university mental health services should be considered when these gender-specific findings are compared to those detailed for developed (first world) and Southern African countries.]

C: Southern African countries

– Attendees (Objective 1)

For attendee (Objective 1)-specific data it can be observed that none of the samples recorded a male to female student attendance ratio greater than 1,50:1. However, one (33,3 per cent) sample reports a male to

female attendance ratio of 1,49:1 (Mupunga, 1997) while the remaining two (66,7 per cent) samples at the University of the Western Cape (UWC) (Naidoo, 1997) accounted for ratios well below 1,00:1. The finding of a slightly elevated male to female student attendance ratio at the University of Zimbabwe, which has a predominantly Black (African) student community, is compatible with the results previously obtained for developing (third world) countries while figures for UWC, which has a predominantly Coloured student community, is compatible with the results previously obtained for developed (first world) countries. This dichotomy, which may well be related to the varying racial composition of the respective student communities, is difficult to contextualise from the results of only two studies but may be proof of the combination of first world and third world conditions co-existing in South (and Southern) Africa.

– Usage/utilisation rates (Objective 3)

For usage/utilisation rate (Objective 3)-specific data only two samples (both from the University of the Western Cape) reported usage/utilisation rates for male or female students (Naidoo, 1997). In both cases female students recorded a substantially higher usage/utilisation rate, male to female student ratio and utilisation ratio. This female disposition to attend the mental health service is compatible with trends emerging from developed (first world) countries.

– Mean number of consultations (Objective 4)

For mean number of consultation (Objective 4)-specific data no sample reported the gender-specific mean number of consultations.

[The commentary appearing in the second paragraph of section 3.3.2.1(c)(i) (Overall student attendees) outlining conditions likely to affect various Southern African university mental health services should be considered when these gender-specific findings are compared to those detailed for developed (first world) and developing (third world) countries.]

(ii) Explanation

A: Usage/utilisation rates (Objective 3)

The studies quoted above strongly suggest that female students are more inclined to attend the college/university mental health service than their male peers. One of the reasons suggested in the literature for this phenomenon is that female students feel more free than men to use college/university mental health services as male students may still feel inhibited in using such services due to a sense of social stigma (Dunn et al., 1980). Likewise, Braaten and Darling (1961) suggest that: (i) females have a lower threshold for referral than males and (ii) girls are given more sanction than boys to acknowledge emotional problems. Therefore, the differential willingness to admit to distress and the reluctance to seek

out a dependency relationship may explain at least part of the consistent finding that females have higher levels of psychiatric (mental health services) utilisation than men (Anderson and Anderson, 1972).

A further factor to consider is the fact that academic competition in education places an extra strain on women attending college/university due to the possible conflict between the traditional female image in society and the (emerging) professional role of women (Binger, 1961). This conflict may contribute to the greater need for psychiatric assistance among female students. A similar pattern was noted by Lloyd and Gatrell (1981), in their study of first year (freshman/fresher) medical students to assess the influence of gender differences on psychological functioning, who found that female students developed more psychiatric symptoms than males and reported less satisfaction with life. Female students also reported more role conflict and described their families as less supporting of their career choice. Further studies that have examined role conflict for students and reported more significant role conflict among female than among male students include Beutell and O'Hare (1987), Gilbert and Holshan (1982), Gilbert, Manning and Ponder (1980), and Hopper (1979).

Therefore, female students (especially those from a historically disadvantaged background) are often subject to ongoing gender discrimination arising from gender stereotyping practised by their communities. Consequently, these female students might be less likely to receive family acceptance and support in their pursuit of a tertiary education than their male peers. This lack of support, together with pre-existing gender stereotyping, might predispose these students to role conflict and resultant adjustment disorders and/or affective disorders and/or anxiety disorders, inter alia, leading to an increased number of mental disorders presenting at the college/university mental health service for evaluation and/or therapeutic intervention. In addition, female students (again especially those from a historically disadvantaged background) are often subject to the added responsibility of caring for dependent children with little support from their families. This dual responsibility of child rearing and studying, which are both time consuming and labour intensive tasks, places increased pressure on these female students, which might also predispose these students to role conflict and resultant adjustment disorders and/or affective disorders and/or anxiety disorders, inter alia, leading to an increased number of mental disorders presenting at the college/university mental health service for evaluation and/or therapeutic intervention.

However, a different pattern emerges in some developing (third world) countries insofar as the estimated prevalence of psychiatric complaints amongst female students at Makerere University College, Uganda, appears to be much lower than elsewhere (German and Arya, 1969). The number of female students at Makerere is small (13 per cent of the total student community) and the authors note that they represent the final products of a long and arduous process of academic and other forms of selection which is much more taxing for women in East Africa than for men. Therefore, in such a situation it is possible that girls with mental disorders had been weeded out before reaching university. This particular situation does not pertain to the University of Cape Town where no such gender discrimination is practised with respect to the selection of students. In addition, the authors comment, there is no doubt that the female students at

Makerere, in spite of university freedoms, remain more shy and less articulate than their male colleagues, and it is probable that they are less likely to report emotional upsets to male doctors. It is possible (although not likely) that local historically disadvantaged female students share this reticence to attend the UCT-SHS-MHS.

B: Mean number of consultations (Objective 4)

The studies quoted above suggest that female students are also more inclined to attend the college/university mental health service for a longer period than their male peers. In this regard, Friedman and Coons (1969) report that females with more severe psychiatric disability tended to be seen longer than males with approximately the same degree of disability (to the extent that diagnosis is related to magnitude of impairment), while females with little or no psychiatric disability (adjustment reaction or no diagnosis) tended to be seen for a shorter number of interviews. The data, the authors note, are consistent with the clinical adage that, given the presence of emotional disturbance, females tend to be more disturbed than males. The support for this adage may stem from therapist belief in its veracity, from patient characteristics, or perhaps from some interaction between these two.

(b) Clinical/diagnostic-specific data

(i) Affective disorder

A: Country and objective-specific outline

In developed (first world) countries this major diagnostic category is the second most commonly reported (excluding "other") in the literature reviewing gender-specific mental disorders affecting students (six of the 14 samples reported in six articles).

- The proportion presenting in male and female students attending the various mental health services varies between a maximum of 63,6 per cent (Jones, 1972, for female students) to a minimum of 3,3 per cent (Friedman and Coons, 1969, for female students). Only three articles produced male to female diagnostic attendance ratios – one (Friedman and Coons, 1969) reported a value greater than 1,00:1 while the other two (Jones, 1972, and Buckle, 1972, correspondingly recorded figures less than 1,00:1) [Objective 1].
- No sample recorded a usage/utilisation rate per 1 000 students stratified by gender [Objective 3].
- No sample reported the mean number of consultations required stratified by gender [Objective 4].

In developing (third world) countries no sample reported the gender-specific distribution of affective disorders.

In Southern African countries this major diagnostic category is reported in both of the samples (both obtained from the Medical University of Southern Africa (MEDUNSA), Germond, 1997).

- The proportion presenting in students varies between a maximum of 39,2 per cent (female students) to 18,8 per cent (male students). The resultant male to female diagnostic attendance ratio is less than 1,00:1 (0,48:1) [Objective 1].
- Neither sample recorded a usage/utilisation rate per 1 000 students stratified by gender [Objective 3].
- Neither sample reported the mean number of consultations required stratified by gender [Objective 4].

Friedman and Coons (1969) note that there was a wide variety of presenting complaints and psychiatric diagnoses amongst their male and female student attendees with no single problem or group of problems being regarded as typical of the patient population as a whole. Indeed, the three major presenting complaints, including affective disorders, represented only 40 per cent of the total patient group. The authors report that although male students were somewhat more likely to be diagnosed as depressed, females complained more frequently of depression. This phenomenon is also documented by Cassell, Marty and Richman (1967). However, no further commentary is provided to explain this apparent anomaly.

B: Consequence

No commentary was provided by authors in the literature concerning the gender-specific consequences of this major diagnostic category.

(ii) Adjustment disorder

A: Country and objective-specific outline

In developed (first world) countries this major diagnostic category is the third most commonly reported (excluding "other") in the literature reviewing gender-specific mental disorders affecting students (four of the 14 samples reported in six articles).

- The presenting in male and female students attending the various mental health services varies between a maximum of 28,7 per cent (Friedman and Coons, 1969, for female students) to a minimum of 7,1 per cent (Selzer, 1960, for female students). Only two articles produced male to female diagnostic attendance ratios – one (Selzer, 1960) reported a value greater than 1,00:1 while the other (Friedman and Coons, 1969) correspondingly recorded a figure less than 1,00:1 [Objective 1].
- No sample recorded a usage/utilisation rate per 1 000 students stratified by gender [Objective 3].
- No sample reported the mean number of consultations required stratified by gender [Objective 4].

In developing (third world) countries no sample reported the gender-specific distribution of adjustment disorders.

In Southern African countries no sample reported the gender-specific distribution of adjustment disorders.

B: Consequence

No commentary was provided by authors in the literature concerning the gender-specific consequences of this major diagnostic category.

(iii) V-codes

In neither developed (first world), developing (third world) or Southern African countries is the gender-specific distribution of this major diagnostic category represented in the literature.

However, certain of the presenting complaints are compatible with the individual V-codes and will be discussed separately below.

– Relationship problem

In neither developed (first world), developing (third world) or Southern African countries does a sample report the gender-specific distribution of relationship problems.

– Family problem

A: Country and objective-specific outline

In developed (first world) countries this individual V-code is reported in two of the 14 samples reported in six articles reviewing gender-specific mental disorders affecting students.

- The proportion presenting in male and female students attending the various mental health services varies between a maximum of 21,9 per cent (Jones, 1972, for female attendees) to a minimum of 14,7 per cent (Jones, 1972, for male attendees). Only one article produced male to female diagnostic attendance ratios (Jones, 1972, at the University of Melbourne, Australia) which reported a value less than 1,00:1 [Objective 1].
- Neither sample recorded a usage/utilisation rate per 1 000 students stratified by gender [Objective 3].
- Neither sample reported the mean number of consultations required stratified by gender [Objective 4].

In developing (third world) countries no sample reported the gender-specific distribution of family problems.

In Southern African countries no sample reported the gender-specific distribution of family problems.

B: Consequence

No commentary was provided by authors in the literature concerning the gender-specific consequences of this individual V-code.

– Academic problem

A: Country and objective-specific outline

In developed (first world) countries this individual V-code is reported in six of the 14 samples reported in six articles reviewing gender-specific mental disorders affecting students.

- The proportion presenting in male and female students attending the various mental health services varies between a maximum of 28,9 per cent (Jones, 1972, for male students) to a minimum of 3,3 per cent (Hersch, Nazario and Backus, 1983, for female students). Only three articles produced male to female diagnostic attendance ratios – all three (Hersch, Nazario and Backus, 1983; Friedman and Coons, 1969, and Jones, 1972) reported values greater than 1,00:1 [Objective 1].
- No sample recorded a usage/utilisation rate per 1 000 students stratified by gender [Objective 3].
- No sample reported the mean number of consultations required stratified by gender [Objective 4].

In developing (third world) countries no sample reported the gender-specific distribution of academic problems.

In Southern African countries no sample reported the gender-specific distribution of academic problems.

B: Consequence

No commentary was provided by authors in the literature concerning the gender-specific consequences of this individual V-code.

– Bereavement

In neither developed (first world), developing (third world) or Southern African countries does any sample report bereavement as a presenting complaint.

– Unplanned/unwanted pregnancy

In neither developed (first world), developing (third world) or Southern African countries does any sample report the gender-specific distribution of unplanned pregnancy – it can be assumed that the male student associated with this event may occasionally be involved in the psychotherapeutic process. In addition, this particular complaint may contribute to other psychiatric diagnoses.

(iv) Anxiety (neurotic) disorder

A: Country and objective-specific outline

In developed (first world) countries this major diagnostic category is the most commonly reported (excluding "other") in the literature reviewing gender-specific mental disorders affecting students (all 14 of the samples reported in six articles). It must be noted that the terms anxiety and neurosis are not necessarily synonymous although most of the authors quoted here do use these terms interchangeably. Therefore, in this subdivision, both these terms have been linked.

- The proportion presenting in male and female students attending the various mental health services varies between a maximum of 52,8 per cent (Dann, 1964, for male students) to a minimum of 2,3 per cent (Friedman and Coons, 1969, for female students). Six articles (Kidd and Caldbeck-Meenan, 1966, employed separate cohorts from Edinburgh and Belfast Universities) produced male to female diagnostic attendance ratios – three reported values greater than 1,00:1 while the other four correspondingly recorded figures less than 1,00:1 [Objective 1].
- The usage/utilisation rate per 1 000 students for this disorder varies between a maximum of 57,5 (Kidd and Caldbeck-Meenan, 1966, for University of Edinburgh female student attendees) to a minimum of 7,0 (Kidd and Caldbeck-Meenan, 1966, for Queen's University of Belfast male student attendees) [Objective 3].
- No sample reported the mean number of consultations required stratified by gender [Objective 4].

In developing (third world) countries no sample reported the gender-specific distribution of anxiety (neurotic) disorders.

In Southern African countries this major diagnostic category is reported in both of the samples (both obtained from the Medical University of Southern Africa (MEDUNSA), Germond, 1997).

- The proportion presenting in students varies between a maximum of 49,3 per cent (male students) to 39,2 per cent (female students). The resultant male to female diagnostic attendance ratio is greater than 1,00:1 (1,26:1) [Objective 1].
- Neither sample recorded a usage/utilisation rate per 1 000 students stratified by gender [Objective 3].
- Neither sample reported the mean number of consultations required stratified by gender [Objective 4].

B: Consequence

No commentary was provided by authors in the literature concerning the gender-specific consequences of this major diagnostic category.

(v) Other disorders

– Personality/character disorder

A: Country and objective-specific outline

In developed (first world) countries this mental disorder is reported in all 14 samples reported in six articles reviewing gender-specific disorders affecting students.

- The proportion presenting in male and female students attending the various mental health services varies between a maximum of 29,3 per cent (Friedman and Coons, 1969, for male students) to a minimum of 1,9 per cent (Jones, 1972, for male students). Six articles (Kidd and Caldbeck-Meenan, 1966, employed separate cohorts from Edinburgh and Belfast Universities) produced male to female diagnostic attendance ratios – four reported values greater than 1,00:1 while the other three correspondingly recorded figures less than 1,00:1 [Objective 1].
- The usage/utilisation rate per 1 000 students for this disorder varies between a maximum of 9,2 (Kidd and Caldbeck-Meenan, 1966, for University of Edinburgh male student attendees) to a minimum of 1,9 (Dann, 1964, for male students) [Objective 3].
- No sample reported the mean number of consultations required stratified by gender [Objective 4].

In developing (third world) countries no sample reported the gender-specific distribution of personality/character disorders.

In Southern African countries no sample reported the gender-specific distribution of personality/character disorders.

B: Consequence

No commentary was provided by authors in the literature concerning the gender-specific consequences of this mental disorder.

– Psychosomatic/psychophysiological disorder

A: Country and objective-specific outline

In developed (first world) countries this mental disorder is reported in two of the 14 samples reported in six articles reviewing gender-specific disorders affecting students.

- The proportion presenting in male and female students attending the various mental health services varies between 39,2 per cent (Dann, 1964, for female students) to 34,5 per cent (Dann, 1964, for male students). Only one article produced male to female diagnostic attendance ratios (Dann, 1964, at University College, Swansea, UK) which reported a value less than 1,00:1 [Objective 1].

- The usage/utilisation rate per 1 000 students varies between a maximum of 18,4 (Dann, 1964, for female students) to 15,3 (Dann, 1964, for male students) [Objective 3].
- No sample reported the mean number of consultations required stratified by gender [Objective 4].

In developing (third world) countries no sample reported the gender-specific distribution of psychosomatic/psychophysiological disorders.

In Southern African countries this mental disorder is reported in both of the samples (both obtained from the Medical University of Southern Africa (MEDUNSA), Germond, 1997).

- The proportion presenting in students varies between a maximum of 8,1 per cent (female students) to 1,4 per cent (male students). The resultant male to female diagnostic attendance ratio is less than 1,00:1 (0,17:1) [Objective 1].
- Neither sample recorded a usage/utilisation rate per 1 000 students stratified by gender [Objective 3].
- Neither sample reported the mean number of consultations required stratified by gender [Objective 4].

B: Consequence

These findings for developed (first world) countries would possibly seem to demonstrate (bearing in mind the inherent danger of generalising the results of two samples) that psychosomatic/psychophysiological disorders are fairly important complaints (when recognised) in relation to their proportion of total mental disorders and usage/utilisation rates in male and female students presenting at college/university mental health services.

– Psychotic disorder

A: Country and objective-specific outline

In developed (first world) countries this mental disorder is reported in 10 of the 14 samples reported in six articles reviewing gender-specific disorders affecting students.

- The proportion presenting in male and female students attending the various mental health services varies between a maximum of 22,1 per cent (Selzer, 1960, for female students) to a minimum of 1,1 per cent (Jones, 1972, for female students). Four articles (Kidd and Caldbeck-Meenan, 1966, employed separate cohorts from Edinburgh and Belfast Universities) produced male to female diagnostic attendance ratios – two reported values greater than 1,00:1 while the other two correspondingly recorded figures less than 1,00:1 (one set of samples could not produce a male to female diagnostic ratio due to the absence of any female patients) [Objective 1].
- The usage/utilisation rate per 1 000 students for this disorder varies between a maximum of 6,4 (Dann, 1964, for female students) to a minimum of 0,0 (Kidd and Caldbeck-Meenan, 1966, for Queen's University of Belfast female student attendees) [Objective 3].
- No sample reported the mean number of consultations required stratified by gender [Objective 4].

In developing (third world) countries no sample reported the gender-specific distribution of psychotic disorders.

In Southern African countries no sample reported the gender-specific distribution of psychotic disorders.

B: Consequence

No commentary was provided by authors in the literature concerning the gender-specific consequences of this mental disorder.

– Sexual disorder

A: Country and objective-specific outline

In developed (first world) countries this mental disorder is reported in four of the 14 samples reported in six articles reviewing gender-specific disorders affecting students.

- The proportion presenting in male and female students attending the various mental health services varies between a maximum of 16,1 per cent (Jones, 1972, for male students) to a minimum of 1,1 per cent (Jones, 1972, for female students in the same study). Only two articles produced male to female diagnostic attendance ratios – both (Jones, 1972, and Buckle, 1972) reported values greater than 1,00:1 [Objective 1].
- .No sample recorded a usage/utilisation rate per 1 000 students stratified by gender [Objective 3].
- No sample reported the mean number of consultations required stratified by gender [Objective 4].

In developing (third world) countries no sample reported the gender-specific distribution of sexual disorders.

In Southern African countries this mental disorder is reported in both of the samples (both obtained from the Medical University of Southern Africa (MEDUNSA), Germond, 1997).

- The proportion presenting in students varies between a maximum of 7,2 per cent (male students) to 0,0 per cent (female students). There is no valid male to female diagnostic attendance ratio due to the absence of female student attendees [Objective 1].
- Neither sample recorded a usage/utilisation rate per 1 000 students stratified by gender [Objective 3].
- Neither sample reported the mean number of consultations required stratified by gender [Objective 4].

Jones (1972) reports that, on the one hand, it was common for male students to present specifically complaining of impotence whereas, on the other hand, it was uncommon for female students to present with frigidity or other sexual problems. The author notes that this pattern occurred even though sexual attitudes were far more liberal than formerly. However, these findings, he believes, are a reflection of changing social attitudes to sex in which adequate sexual function, irrespective of marital status, is a desirable goal and guilt may be felt if function is inadequate.

B: Consequence

No commentary was provided by authors in the literature concerning the gender-specific consequences of this mental disorder.

(vi) Summary

The relative importance of the individual major diagnostic categories, V-codes and other mental disorders amongst students attending the various mental health facilities serving tertiary educational institutions in developed (first world) countries are listed below in Table 3.6 – in the same order in which they appear in this subdivision. (There was no sample for developing (third world) countries and only one for Southern African countries.) These disorders are ranked primarily according to their appearance in the 14 samples detailed in the Literature Review although, where two (or more) clinical diagnoses appear in the identical number of samples, secondary ranking is according to the mean proportion recorded by each of these disorders presenting in students attending the various college/university mental health services.

Table 3.6 Relative importance of individual clinical diagnoses of students attending college/university mental health facilities stratified by gender.

Developed (first world) countries				
Diagnoses	**Appearance (ex 7 samples for Male or Female student attendees and ex 14 samples for combined student attendees)**		**Mean proportion**	**Rank**
	n	**%**		
(a) Male student attendees				
Affective disorder	3	42,9	24,8	4
Adjustment disorder	2	28,6	16,6	6
V-codes (general)	0	0,0		10
- Relationship problem	0	0,0		10
- Family problem	1	14,3	14,7	9
- Academic problem	3	42,9	19,6	5
- Bereavement	0	0,0		10
- Unplanned pregnancy	0	0,0		10
Anxiety (neurotic) disorder	7	100,0	25,2	1
Other disorders				
- Personality disorder	7	100,0	15,3	2
- Psychosomatic disorder	1	14,3	34,5	8
- Psychotic disorder	5	71,4	9,5	3
- Sexual disorder	2	28,6	14,8	7
(b) Female student attendees				
Affective disorder	3	42,9	33,6	4
Adjustment disorder	2	28,6	17,9	6
V-codes (general)	0	0,0		10
- Relationship problem	0	0,0		10
- Family problem	1	14,3	21,9	9
- Academic problem	3	42,9	12,7	5
- Bereavement	0	0,0		10
- Unplanned pregnancy	0	0,0		10
Anxiety (neurotic) disorder	7	100,0	27,7	1
Other disorders				
- Personality disorder	7	100,0	12,9	2
- Psychosomatic disorder	1	14,3	39,2	8

- Psychotic disorder	5	71,4	7,9	3
- Sexual disorder	2	28,6	5,9	7
(c) Combined student attendees				
Affective disorder	6	42,9	29,2	4
Adjustment disorder	4	28,6	34,5	6
V-codes (general)	0	0,0		10
- Relationship problem	0	0,0		10
- Family problem	2	14,3	16,9	9
- Academic problem	6	42,9	16,1	5
- Bereavement	0	0,0		10
- Unplanned pregnancy	0	0,0		10
Anxiety (neurotic) disorder	14	100,0	26,4	1
Other disorders				
- Personality disorder	14	100,0	14,1	2
- Psychosomatic disorder	2	14,3	35,8	8
- Psychotic disorder	10	71,4	8,7	3
- Sexual disorder	4	28,6	10,4	7

It must be noted that the failure of authors to document a clinical diagnosis in samples reported in the Literature Review does not necessarily mean that this mental disorder is unimportant and, therefore, of little concern to the student community.

3.3.3.2 Race/population group

This variable is the fifth most commonly reported one in the literature reviewing developed (first world) countries (6 ex 61 samples reported in 43 articles). It is also documented in one of the six samples recorded in four articles from developing (third world) countries and one of the 19 samples obtained from five Southern African universities. The most useful indicator to assess the race/population group-specific profile of mental health service attendees is the Black to White (B:W) ratio. Therefore, this discussion will confine itself to addressing the Black to White ratios recorded in Table 3.7. In the case of developed (first world) countries, these Black to White ratios are further stratified according to ratios in excess of 0,15:1, ratios between 0,15 and 0,04:1 and ratios less than 0,04:1. On the other hand, the race/population group-specific profile of mental health service utilisation according to usage/utilisation rates per 1 000 students, utilisation ratios (where available) and the mean number of consultations per student is assessed by the individual Black and White-specific figures recorded in Table 3.7.

This subsection also functions to review the relative frequency (importance) of individual clinical diagnoses (both psychiatric diagnoses and presenting complaints format) for the African, Coloured, Indian and White or Black and non-Black student attending the college/university mental health service (refer to Table 3.8). These race/population group-specific findings are substantially reorganised by grouping identical clinical diagnoses (in the form of major diagnostic categories such as affective disorders, V-codes, anxiety (neurotic) disorders and "other" disorders including several separately coded disorders) to provide the material appearing under the individual subheadings.

Table 3.7 Number of attendees, usage/utilisation rate per 1 000 students and number of consultations per patient according to race/population group of students attending college/university mental health facilities.

Reference	Location	N	Details of sample	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
(a) Developed (first world) countries						
Alston (1974)	New York University, USA	68[1]	Student attendees from 09/69 to 06/70	B: N/A W: N/A	N/S	B: 2,7 W: 1,7 B:W = 1,59:1
Davis and Swartz (1972)	City College of San Francisco, USA	N/S[2]	Student attendees from 01/70 to 03/70	B: N/S (9,0%) W: N/S (91,0%)	N/S	N/S
		N/S[2]	Student attendees from 03/70 to 05/70	B: N/S (21,0%) W: N/S (79,0%)	N/S	N/S
		N/S[2]	Student attendees from 05/70 to 06/70	B: N/S (23,6%) W: N/S (76,4%)	N/S	N/S
Dunn et al. (1980)	College Mental Health Center, Boston, USA	814[3]	Student attendees from 09/75 to 06/77	B: 41 (5,0%)[4] W: 757 (93,0%)[4] R: 16 (2,0%)[4] B:W = 0,05:1	B: 16,5 [1,33] W: 25,4 [2,05] R: 1,4 [0,11] B:W = 0,65:1	N/S
Gibbs (1975)	Stanford University, USA	3 604	Student attendees at Cowell Health Center from 09/69 to 06/72	B: 87 (2,4%) W: 3 517 (97,6%) B:W = 0,02:1	1969-70: B: 102,0 [-] W: 82,0 [-] B:W = 1,24:1 1970-71: B: 81,0 [-] W: 126,0 [-] B:W = 0,64:1 1971-72: B: 64,0 [-] W: 110,0 [-] B:W = 0,58:1	B: 4,73 W: 4,27 B:W = 1,11:1 N/S N/S
Jenkins et al. (1986)	Anonymous large mid-western university, USA	414[5]	Student attendees from 09/81 to 06/82	B: 79 (19,1%) W: 335 (80,9%) B:W = 0,19:1	N/S	N/S
Rosecan et al. (1992)	Georgetown University, USA	48[6]	Undergraduate student admissions to inpatient psychiatric unit from 01/87 to 12/89	A: 2 (4,2%) B: 8 (16,7%) W: 37 (77,0%) N/S: 1 (2,1%) B:W = 0,21:1	N/S	N/S
Stangler and Printz (1980)	University of Washington, USA	500	Student attendees over unspecified 5 month period	A: 28 (5,6%) B: 18 (3,6%) R: 13 (2,6%) W: 441 (88,2%) B:W = 0,12:1	N/S	N/S
Winer and Dorus (1972)	University of Chicago, USA	273	First, fourth and fifth year undergraduate student attendees from 09/68 to 06/70	B: 7 (2,6%) W: 246 (90,1%) N/S: 20 (7,3%) B:W = 0,03:1	N/S	N/S
(b) Developing (third world) countries						
German and Arya (1969)	Makerere University College, Uganda	121	Student attendees from 10/66 to 06/67	A: 108 (89,3%) I: 13 (10,7%) A:I = 8,31:1	A: 96,4 [1,08] I: 56,3 [0,63] A:I = 1,71 :1	N/S
(c) Southern African countries						
Mupunga (1997)	University of Zimbabwe	473	Student attendees from 01-12/96	A: 469 (99,2%)[7] C: 0 (0,0%) I: 1 (0,2%) W: 3 (0,6%) B:W = 117,25:1	N/S	N/S

Footnotes

1. This study involves 34 minority (mainly Black and Hispanic) students attending the Mental Health Section at New York University, during a one year period from 1969/70, who were matched to an equal number of non-minority student attendees.

2. The authors note that the increase in utilisation of the Mental Health Service by Black students (who comprised 14 per cent of the student community) followed strategies revolving around targeted outreach programmes implemented by the authors.

3. The entire case load of the College Mental Health Center for 1975 to 1977 was 847 cases but the authors excluded 33 cases due to various clerical reasons to leave a sample of 814 cases for which nearly complete data were available.

4. The authors note that when the race/population group-specific attendance figures were compared to the composition of the local tertiary institution student bodies (figures from which the above usage/utilisation rates have been calculated), a significant difference regarding minority student attendance at the College Mental Health Center is noted ($\chi^2 = 8,18$; $\rho < 0,02$).

5. The entire case load of the counselling centre for 1981/82 was 469 cases but the authors excluded 55 cases because of extraneous factors which affected the duration of counselling (viz. number of interviews/consultations) – which is the primary focus of the article to leave a sample of 414 cases.

6. Although there were 48 separate admissions of Georgetown University students to the mental healthcare unit during the 3 year study period, one student was admitted twice in 1989 and another was admitted twice, once in 1987 and again in 1989. Therefore, the remaining 44 admissions correspond with individual students hospitalised one time at Georgetown University Hospital. The original figure of 48 admissions has been employed here in the absence of modified figures.

7. The student body of the University of Zimbabwe consists of a predominantly African student population (no figures provided by the correspondent) so that the overwhelming majority of African students amongst Student Health Service attendees with psychiatric diagnoses may not represent a statistically significant finding.

Abbreviations appearing in Table 3.7:

N/S = Result not specified.
A = African students (developing (third world) country and Southern African-specific classification).
A = Asian students (developed (first world) country-specific classification).
B = Black students (developed (first world) country-specific classification).
C = Coloured students (Southern African-specific classification).
I = Indian students (developing (third world) country and Southern African-specific classification).
R = Remaining (non-Black, non-White and non-Asian) students (developed (first world) country-specific classification).
W = White students (developed (first world) and Southern African-specific classification).

Table 3.8 Clinical diagnoses or presenting complaints for students attending college/university mental health facilities stratified by race/population group.

Reference	Location	N	Details of sample	Classification	Diagnoses/presenting complaints	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
(a) Developed (first world) countries								
Alston (1974)	New York University, USA	34	Minority (mainly Black and Hispanic) student attendees from 09/69 to 06/70	Modified presenting complaints[1]	1. Character[2] 2. Situational[3] 3. Cultural[4] 4. Neurotic[5] 5. Psychotic[6]	15 (44,1%) 9 (26,5%) 5 (14,7%) 3 (8,8%) 2 (5,9%)	N/A	N/S
		34	Non-minority (White) student attendees from 09/69 to 06/70	Modified presenting complaints[1]	1. Neurotic[5] 2. Character[2] 3. Situational[3] 4. Pre-psychotic[7] 5. Cultural[4]	14 (41,2%) 11 (32,4%) 6 (17,6%) 2 (5,9%) 1 (2,9%)	N/A	N/S
Gibbs (1975)	Stanford University, USA	87	Black student attendees at Cowell Health Center from 09/69 to 06/72	Presenting complaints	1. Affective moods 2. Heterosexual problems 3. Identity crisis or conflict 4. Interpersonal problems 5. Academic problems 6. Psychosomatic complaints 7. Family/autonomy problems 8. Loneliness/ depersonalisation 9. Marital problems 10. Aggression/impulse control 11. Career/vocational concerns 12. Homosexual concerns 13. Suicidal thoughts/ behaviour 14. Drugs/alcohol abuse 15. Unwanted pregnancy	65 (74,7%) 42 (48,3%) 41 (47,1%) 40 (46,0%) 31 (35,6%) 22 (25,3%) 21 (24,1%) 14 (16,1%) 10 (11,5%) 8 (9,5%) 8 (9,5%) 6 (6,9%) 6 (6,9%) 5 (5,7%) 4 (4,5%)	N/S	N/S
		3 517	Non-Black student attendees at Cowell Health Center from 09/69 to 06/72	Presenting complaints	1. Interpersonal and heterosexual problems[8] 2. Interpersonal and heterosexual problems[8] 3. Marital problems 4. Affective disorders 5. Academic concerns	1 266 (36,0%) 528 (15,0%) 457 (13,0%) 211 (6,0%)	N/S	N/S
(b) Developing (third world) countries								
NO ENTRIES								

Reference	Location	N	Details of sample	Classification	Diagnoses/presenting complaints	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
(c) Southern African countries								
NO ENTRIES								

Footnotes

1. The author devised a classification rating to reflect the focus of the students' initial complaint as presented in the initial interview. This was the patient's view of his/her problem, the behaviour about which he/she was most distressed, or the symptoms with which he/she expressed concern.
2. The classification of "character" was employed where the patient initially focused on behaviours representative of deeply ingrained, dynamically-based adjustment problems. In these cases the patient must have verbalised some sense or awareness that the behaviour was recurrent and undesirable.
3. The classification of "situational" was employed where the patient pointedly emphasised a problem in an area of his/her life – academic, home, living arrangements, boy/girlfriend or spouse, work and/or financial – as the cause of his/her distress. The patient must have intimated that he/she felt that a situational problem produced the psychological stress and that a situational change will appreciably (and at least temporarily) decrease the psychological pressure or anxiety.
4. The classification of "cultural" was employed when the patient cited his/her membership in a minority, religious or cultural group as the pivotal and causal factor in his/her current psychological distress. In effect, this rating could be made only when the patient clearly linked his/her problem to membership in the group.
5. The classification of "neurotic" was employed in instances in which disrupting anxiety or more classic neurotic symptomology was predominant in the patients' presenting complaints. This was most often presented as feelings of being anxious, disturbances in sleep or concentration, mild depressions, tension indicators such as headaches, gastrointestinal complaints, etc.
6. The classification of "psychotic" was employed when patients initially presented and/or complained of delusional behaviour, hallucinations, severely altered mood states, and/or gross impairment of functioning.
7. The classification of "pre-psychotic" was employed where the patient verbalised relatively clear symptoms of schizophrenia, but at levels often described in clinical diagnosis as incipient or borderline, and where the student did not complain of significant impairment despite his/her felt distress.
8. Interpersonal problems and heterosexual problems comprise two separate categories of complaint, employed by the author, which have been combined for the description of presenting complaints affecting non-Black students. Consequently, the result obtained for these combined categories has been recorded twice in the list of 5 leading presenting complaints – in first and second position assuming a near equal split of the separate categories of complaint.

(a) Patient-specific data

(i) Country and objective-specific outline

A: Developed (first world) countries

– Attendees (Objective 1)

For attendee (Objective 1)-specific data there is a definite time-specific trend spanning the 1970's and the 1980's which is characterised by an increasing proportion of Black – relative to White – students seeking evaluation and/or therapeutic intervention at the various college/university mental health services. This phenomenon is probably indicative of a changing social order which empowered an increasing number of Black students to register at colleges and universities in developed (first world) countries rather than necessarily reflecting an increasing incidence of psychological or psychiatric complaints affecting Black students attending these tertiary educational institutions. Therefore, this subdivision will also highlight relevant chronological details relating to Black to White attendance ratio ranges when it documents the race/population group-specific attendance of college/university mental health services reported in the literature.

It is noteworthy that both of the samples recording Black to White student attendance ratios greater than 0,15:1 involved students attending the mental health services of their respective colleges/universities after 1980. This finding is probably due to an increased number of Black students attending these predominantly White institutions during the 1980s than in preceding decades.

Furthermore, both of the samples recording Black to White student attendance ratios between 0,15:1 and 0,04:1 involved students attending the mental health services of their respective colleges/universities between 1975 and 1980. This finding is probably due to a disproportionately low number of Black students attending these predominantly White institutions during the mid-late 1970s.

On the other hand, both of the samples recording Black to White student attendance ratios less than 0,04:1 involved students attending the mental health services of their respective colleges/universities between 1968 and 1972 – although Gibbs' definition of Black students does not include Hispanic and other minority students who are included amongst the White students. This finding is probably due to a negligible number of Black students attending these virtually exclusively White institutions prior to the early 1970s. This hypothesis is largely confirmed by the lack of Black to White student attendance ratios (or any other race/population group-specific details) appearing in articles published prior to this date.

In conclusion, an overwhelming predominance of White students attending the mental health services of their respective colleges/universities in the USA is reported in all six (100,0 per cent) samples. This trend

is time-specific insofar as the magnitude of White student predominance was greatest prior to the early 1970s decreasing somewhat in the 1980s. This finding (like that of gender outlined above) is probably related to the composition of the total student community rather than other factors affecting usage of these facilities by Black students although they do utilise the mental health service somewhat less than their White peers in both samples where usage/utilisation rates have been provided by the authors.

– Usage/utilisation rates (Objective 3)

For usage/utilisation rate (Objective 3)-specific data only two samples reported usage/utilisation rates for Black and White students (Dunn et al., 1980 and Gibbs, 1975). In both cases, White students recorded a substantially higher usage/utilisation rate – the only exception is Gibbs' 1969-70 subgroup although the author's other two subgroups demonstrate the reverse. In fact, Gibbs documents concern about the time-specific decline in usage of the mental health service recorded by Black students and proposes a number of possible reasons for this phenomenon including dissatisfaction with the service provided or the utilisation of alternative on-campus facilities.

Where overall usage/utilisation rates together with race/population group-specific usage/utilisation rates are recorded in the literature reviewed, it has been possible to insert additional utilisation ratios (Bridges-Webb et al., 1992) to the basic results obtained from the original article already documented in Table 3.7. These ratios are calculated by dividing the Black, White and "remaining" student usage/utilisation rates by the overall usage/utilisation rate. They are displayed in square brackets adjacent to the documented usage/utilisation rates. Only one sample (Dunn et al., 1980) included the requisite data to determine utilisation ratios which demonstrate that White students recorded a considerably higher figure than their Black student peers – both figures are greater than 1,00 as students from the remaining race/population groups reported a utilisation ratio of only 0,11. Therefore, these results imply an overrepresentation of White student attendees in developed (first world) college/university mental health service presentations.

– Mean number of consultations (Objective 4)

For mean number of consultation (Objective 4)-specific data only two samples reported the mean number of consultations for Black or White students (Alston, 1974, and Gibbs, 1975). In both cases, Black students recorded a greater mean number of consultations although it must be noted that Alston compares White students to the remaining race/population group while Gibbs compares Black students to the rest. This finding that Black students require longer-term treatment than their White peers is in contrast to the race/population group-specific usage/utilisation rates. This would imply that Black students who do actually attend the mental health service are, generally, in greater need of assistance.

[The commentary appearing in the second paragraph of section 3.3.2.1(a)(i) (Overall student attendees) outlining conditions likely to affect the majority of developed (first world) college/university mental health

services should be considered when these race/population group-specific findings are compared to those detailed for developing (third world) and Southern African countries.]

B: Developing (third world) countries

– Attendees (Objective 1)

For attendee (Objective 1)-specific data this variable is only reported in one sample (German and Arya, 1969, at Makerere University College, Uganda) where African and Indian students are compared. This finding of predominantly African student attendance is probably related to the composition of the total student community rather than other factors affecting the usage of these facilities by African or Indian students.

– Usage/utilisation rates (Objective 3)

For usage/utilisation rate (Objective 3)-specific data only one sample reported usage/utilisation rates for African and Indian students (German and Arya, 1969, at Makerere University College, Uganda) at 96,4 and 56,3 attendees per 1 000 students, respectively. These figures (together with the respective utilisation ratios) therefore demonstrate an African student (relative, in this case, to their generally more prosperous Indian student peers) predisposition to attend the mental health service which is in direct contrast to the trend emerging from developed (first world) countries – although it is difficult to contextualise this situation from the results of only one study. In addition, White students, instead of Indian students, represent the role of the historically advantaged in these countries.

– Mean number of consultations (Objective 4)

For mean number of consultation (Objective 4) -specific data no sample reported the race/population group-specific mean number of consultations.

[The commentary appearing in the second paragraph of section 3.3.2.1(b)(i) (Overall student attendees) outlining conditions likely to affect the majority of developing (third world) college/university mental health services should be considered when these race/population group-specific findings are compared to those detailed for developed (first world) and Southern African countries.]

C: Southern African countries

– Attendees (Objective 1)

For attendee (Objective 1)-specific data this variable is only reported in one sample (Mupunga, 1997, at the University of Zimbabwe). Like developing (third world) countries, this finding of predominantly African student attendance is probably related to the composition of the total student community rather than other factors affecting the usage of these facilities by African students.

– Usage/utilisation rates (Objective 3)

For usage/utilisation rate (Objective 3)-specific data no sample reported race/population group-specific usage/utilisation rates.

– Mean number of consultations (Objective 4)

For mean number of consultation (Objective 4)-specific data no sample reported the race/population group-specific mean number of consultations.

[The commentary appearing in the second paragraph of section 3.3.2.1(c)(i) (Overall student attendees) outlining conditions likely to affect various Southern African university mental health services should be considered when these race/population group-specific findings are compared to those detailed for developed (first world) and developing (third world) countries.]

(ii) Explanation

A: Usage/utilisation rates (Objective 3)

The studies quoted above suggest that Black students are less inclined to attend the college/university mental health service than their White peers. Several references to this phenomenon have been made in the literature. Indeed, the sociological trend of Blacks attending predominantly White colleges/universities in America in increasing numbers since the mid-1960s has led to their psychological problems and their patterns of use of college/university mental health facilities becoming areas of legitimate concern to resident mental health professionals in these colleges/universities (Gibbs, 1975). Likewise, Mackey (1972) observes that these newly arrived minority group students represent a population at high risk who are subject to intense adjustment problems on a strange new campus and, for some of them, a frightening new world.

Therefore, coping with the diverse academic challenges and demands of university life can be a daunting proposition for the average student which is further accentuated in the historically disadvantaged student (in

both socio-economic and, more relevantly, academic spheres) who has to cope with meeting the required academic norm. Struggling with the consequences of an inferior education and coping (or not coping) to adapt to these demanding academic requirements must, by definition, lead to potentially serious adjustment problems to the college/university, thereby predisposing these students to a host of adjustment disorders, inter alia, leading to an increased number of mental disorders presenting at the college/university mental health service for evaluation and/or therapeutic intervention. From the local perspective, the sociological changes that are currently affecting this country were preceded by alterations in admission policies/trends to the University of Cape Town allowing for an increased entry of an increasingly diverse cross-section of historically disadvantaged students from varied cultural backgrounds. Assimilation into a totally foreign (for many of these students) Eurocentric-orientated culture must also, by definition, lead to potentially serious adjustment problems to the University, thereby predisposing these students to a host of adjustment disorders, inter alia, leading to an increased number of mental disorders presenting at the UCT-SHS-MHS for evaluation and/or therapeutic intervention. In addition, historically disadvantaged Black students are often subject to increased social and familial responsibilities – often including younger siblings, dependent consorts and children who may reside upcountry away from them – than their more affluent (on average) White counterparts. Shouldering these added responsibilities with often extremely limited financial resources, support structures and inadequate domestic facilities must also, by definition, lead to potentially serious adjustment problems to the University, thereby predisposing these students to a host of adjustment disorders presenting at the college/university mental health service for evaluation and/or therapeutic intervention.

Mackey (1972) notes that a particular problem posed by minority group students at the University of California at Irvine is their under-utilisation of available, though often inadequate, resource facilities although Black female students (especially those who were older and who had had previous counselling therapy) were significantly less reluctant than Black male students to utilise Counselling and Health Centres. Similarly, Kysar (1966) at the University of Illinois, Chicago Circle Campus, indicates that students from non-White (Black), inner-city, low-income and first generation college/university family backgrounds – largely analogous to many of the University of Cape Town's historically disadvantaged students – were underrepresented amongst users of the mental health clinic. It is possible that these locally historically disadvantaged students may share this reticence to attend the UCT-SHS-MHS. Mackey (1972) and Leavitt, Carey and Swartz (1971) report that where the demands of Black students for an increasing number of Black counsellors and therapists have been met, there are suggestions that minority students have been less reluctant to come to traditional mental health facilities for assistance. This finding might have relevance for the predominantly White staffed UCT-SHS-MHS. Further examples in the literature showing that Black students were not as likely to use mental health services as White students include Cheatham, Shelton and Ray (1987), Cimbolic, Thompson and Waid (1981), and Webster and Fretz (1978).

This phenomenon of Black students being unwilling to utilise these facilities could be explained by the observation that for many Black people, going to a mental health service is a ready admission to "being

crazy" (Davis and Swartz, 1972). For Black males, the suggestion that they are not coping effectively with their lives touches highly sensitive areas of identity and masculinity. For females, concern for femininity does not seem to be as much of an issue as anxiety over not being able to deal adequately with problems, handle crises, and arrive at appropriate solutions. Therefore, most Black people do not come into contact with psychiatric clinics unless overtly disruptive, psychotic or arrested. Additionally, Black students felt that it was inappropriate to discuss personal adjustment issues with mental health services staff (Johnson, 1977; Walter and Miles, 1981).

Gibbs (1975) states that decreasing use of the mental health clinic by Black students, as they have increased proportionately in the student population and as non-Black usage of the clinic has fluctuated in an upward trend may be interpreted in several ways: (i) other university services aimed at minority students have expanded over time, so that there are more supportive services available to them; (ii) as the proportion of Black students has increased, they have had a larger community for social and cultural contacts, perhaps reducing the interethnic tensions; (iii) creative opportunities and extracurricular activities have proliferated for Black students, so that these organisations may function as therapeutic communities for those who participate, and (iv) it is also possible that this trend indicates ambivalence or dissatisfaction with the services at the clinic.

On the other hand, Sue and Kirk (1975) established that Asian-American (including Indian) freshmen/freshers significantly over-utilised the mental health service of a large American state university and proposed the following reasons for this finding: (i) limited communication in homes; (ii) the restraint of strong feelings in family circles, and (iii) the fact that it is considered to be a weakness to admit to having a problem you cannot solve on your own. It is possible that local Indian students may share this keenness to attend the UCT-SHS-MHS.

B: Mean number of consultations (Objective 4)

The studies quoted above suggest that Black students are, on the other hand, more inclined to attend the college/university mental health service for a longer period than their White peers. In this regard, Alston (1974) notes that the significantly higher number of consultations required by minority students in his study group could indicate that: (i) more reinforcement and greater reassurance were necessary for them, or (ii) their stresses and problems were greater and they, therefore, were more likely to need repeated help. The important point, the author observes, is that there is consequently no indication that minority students were discouraged by the experience of psychotherapeutic intervention any more than non-minority students as their utilisation of the mental health service, as measured by returns for service, was greater than that of the non-minority students.

(b) Clinical/diagnostic-specific data

(i) Affective disorder

A: Country and objective-specific data

In developed (first world) countries this major diagnostic category is reported in two of the four samples (both obtained from Stanford University – Gibbs, 1975) reported in two articles.

- The proportion presenting in students varies between a maximum of 74,7 per cent (Black students) to 13,0 per cent (non-Black students). The resultant Black to White diagnostic attendance ratio is greater than 1,00:1 (5,75:1) [Objective 1].
- Neither sample recorded a usage/utilisation rate per 1 000 students stratified by race/population group [Objective 3].
- Neither sample reported the mean number of consultations required stratified by race/population group [Objective 4].

In developing (third world) countries no sample reported the race/population group-specific distribution of affective disorders.

In Southern African countries no sample reported the race/population-specific distribution of affective disorders.

It is extremely noteworthy that the Black student sample recorded a proportion with affective disorder in excess of 50 per cent of attendees while the corresponding non-Black sample reported a proportion less than 20 per cent of attendees (Gibbs, 1975).

B: Consequence

Gibbs (1975) reports that Black students' feelings of depression and anger could often be traced to problems in other areas of social, personal or academic adjustment. Indeed, some students were overwhelmed by depression, or hostility, which had a debilitating effect on their ability to handle their normal tasks, but seemed unrelated to specific precipitating events. The author notes that many of these symptoms experienced by Black students are directly related to their membership of a disadvantaged minority group (in the USA). This is accompanied by feelings of inferiority, worthlessness, hostility, anger and fear, all of which impede his/her development as a person and negatively affect his/her academic performance and his/her interpersonal skills. Comer (1972) and Pierce (1968) quoted by Gibbs (1975) note that in order for Black students to develop their full potential, they have to learn to cope with the above feelings and channel some of these feelings of aggression and hostility into more constructive efforts. Although (perhaps even because) they form a disadvantaged majority group in South Africa, there is no reason to believe the local

Black students attending UCT would not be subject to the same range of negative emotions as their American peers and, consequently, be prone to the same detrimental outcome.

(ii) Adjustment disorder

A: Country and objective-specific data

In developed (first world) countries this major diagnostic category is reported in two of the four samples (both obtained from New York University – Alston, 1974) reported in two articles.

- The proportion presenting in students varies between a maximum of 26,5 per cent (minority – mainly Black and Hispanic students) to 17,6 per cent (non-minority – White – students). The resultant Black to White diagnostic attendance ratio is greater than 1,00:1 (1,51:1) [Objective 1].
- Neither sample recorded a usage/utilisation rate per 1 000 students stratified by race/population group [Objective 3].
- Neither sample reported the mean number of consultations required stratified by race/population group [Objective 4].

In developing (third world) countries no sample reported the race/population group-specific distribution of adjustment disorders.

In Southern African countries no sample reported the race/population-specific distribution of adjustment disorders.

The Literature Review has frequently mentioned the additional stress affecting educationally underprepared and historically disadvantaged Black students attending college/university in both developed (first world) and Southern African countries so that these students could, consequently, quite easily be predisposed to a host of adjustment disorders. As previously mentioned for overall student attendees, the most frequent presenting complaints associated with the clinical diagnosis of adjustment disorder are academic stress or study problems closely followed by anxiety and depression (Friedman and Coons, 1969).

B: Consequence

No commentary was provided by authors in the literature concerning the race/population group-specific consequences of this major diagnostic category.

(iii) V-codes

In neither developed (first world), developing (third world) or Southern African countries is the race/population group-specific distribution of this major diagnostic category represented in the literature.

However, certain of the presenting complaints are compatible with the individual V-codes and will be discussed separately below.

– Relationship problem

A: Country and objective-specific data

In developed (first world) countries this individual V-code is reported in two of the four samples (both obtained from Stanford University – Gibbs, 1975) reported in two articles.

- The proportion presenting in students varies between a maximum of 48,3 per cent (Black students) to 36,0 per cent (non-Black students). The resultant Black to White diagnostic attendance ratio is greater than 1,00:1 (1,34:1) [Objective 1].
- Neither sample recorded a usage/utilisation rate per 1 000 students stratified by race/population group [Objective 3].
- Neither sample reported the mean number of consultations required stratified by race/population group [Objective 4].

In developing (third world) countries no sample reported the race/population group-specific distribution of relationship problems.

In Southern African countries no sample reported the race/population-specific distribution of relationship problems.

Gibbs (1975) notes that Black female students presented feelings of depression, anger or hostility because they felt that Black male students were inattentive, insensitive to their needs for affection and companionship, and overly preoccupied with sexual concerns. Eight per cent of Black female students in her study group attended for counselling to confirm fear of pregnancy, to express guilt over sexual relations or to seek accurate information on birth control or venereal disease. Although sexual promiscuity was rarely involved, the author comments that these students exhibited considerable naiveté concerning sexual practices, birth control methods and venereal disease prevention. Several Black male students admitted that they were often more attracted to White female students with similar interests and values, but felt guilty and disloyal to Black females. There is no reason to believe that local Black male and female students attending UCT would not be subject to the same fears and concerns as their American peers.

B: Consequence

No commentary was provided by authors in the literature concerning the race/population group-specific consequences of this individual V-code.

– Family problem

A: Country and objective-specific data

In developed (first world) countries this individual V-code is reported in only one of the four samples reported in two articles.

- The proportion presenting in students is restricted to 24,1 per cent (Gibbs, 1975, for Black students) [Objective 1].
- This sample recorded no usage/utilisation rate per 1 000 students stratified by race/population group [Objective 3].
- This sample reported no mean number of consultations required stratified by race/population group [Objective 4].

In developing (third world) countries no sample reported the race/population group-specific distribution of family problems.

In Southern African countries no sample reported the race/population-specific distribution of family problems.

Gibbs (1975) notes that problems with parents or families affecting Black students usually centred around the issues of autonomy, financial management, social activities and socio-political attitudes and involvement. The majority of this group felt that there was a considerable generation gap in values about lifestyle and political opinions. For the lower-class student, the problem of independence from parental authority was complicated by the fact that he/she was often depriving the family of much needed additional income and creating greater financial and social strains for the whole family. Lower-class Black students were further handicapped in their drive for autonomy by two other characteristics of their culture – their circumscribed environment, which limited their opportunities for adapting to new situations, and their extended family structure, which emphasises collective priorities and goals and frequently does not reward individual efforts to achieve or to differentiate oneself from the rest of the family (Rainwater, 1967, and Schulz, 1969). This phenomenon reported amongst minority Black students in the USA is, at least, as relevant, if not more so, for their local disadvantaged majority peers in South Africa who are burdened by additional traditional duties and expectations.

B: Consequence

No commentary was provided by authors in the literature concerning the race/population group-specific consequences of this individual V-code category.

– Academic problem

A: Country and objective-specific data

In developed (first world) countries this individual V-code is reported in two of the four samples (both obtained from Stanford University – Gibbs, 1975) reported in two articles.

- The proportion presenting in students varies between a maximum of 35,6 per cent (Black students) to 6,0 per cent (non-Black students). The resultant Black to White diagnostic attendance ratio is greater than 1,00:1 (5,93:1) [Objective 1].
- Neither sample recorded a usage/utilisation rate per 1 000 students stratified by race/population group [Objective 3].
- Neither sample reported the mean number of consultations required stratified by race/population group [Objective 4].

In developing (third world) countries no sample reported the race/population group-specific distribution of academic problems.

In Southern African countries no sample reported the race/population-specific distribution of academic problems.

B: Consequence

Gibbs (1975) notes that academic problems affecting Black students resulted in anxiety or depression which was interfering with the student's ability to perform academic tasks effectively. Most of the students attributed their difficulties to poor high school preparation, poor study habits, and lack of self-confidence. (This context is extremely relevant within the South African setting.) Indeed, the author notes that students who had been admitted to Stanford University under altered admission criteria in the Task Force Program (equivalent to the UCT Academic Development Programme) were overrepresented amongst mental health service attendees. In addition, among mainly postgraduate students, other personal problems made it more difficult for them to concentrate on their academic work, and thus the constant threat of academic failure simply created a vicious cycle of anxiety and inability to cope with academic demands.

– Bereavement

In neither developed (first world), developing (third world) or Southern African countries does any sample report bereavement as a presenting complaint.

– Unplanned/unwanted pregnancy

A: Country and objective-specific data

In developed (first world) countries this individual V-code is reported in only one of the four samples reported in two articles.

- The proportion presenting in students is restricted to 4,5 per cent (Gibbs, 1975, for Black students) [Objective 1].
- This sample recorded no usage/utilisation rate per 1 000 students stratified by race/population group [Objective 3].
- This sample reported no mean number of consultations required stratified by race/population group [Objective 4].

In developing (third world) countries no sample reported the race/population group-specific distribution of unplanned/unwanted pregnancy.

In Southern African countries no sample reported the race/population-specific distribution of unplanned/unwanted pregnancy.

B: Consequence

This solitary finding would possibly seem to suggest (bearing in mind the inherent danger of generalising the results of a single study) that unplanned/unwanted pregnancy could be an important diagnosis (or contributing factor) in students presenting at college/university mental health services in developed (first world) countries (or, indeed, developing (third world) and Southern African countries) when documented as such.

(iv) Anxiety (neurotic) disorder

A: Country and objective-specific data

In developed (first world) countries this major diagnostic category is reported in two of the four samples (both obtained from New York University – Alston, 1974) reported in two articles. It must be noted that the

terms anxiety and neurosis are not necessarily synonymous although most of the authors quoted here do use these terms interchangeably. Therefore, in this subdivision, both these terms have been linked.

- The proportion presenting in students varies between a maximum of 41,2 per cent (non-minority – White – students) to 8,8 per cent (minority – mainly Black and Hispanic – students). The resultant Black to White diagnostic attendance ratio is less than 1,00:1 (0,21:1) [Objective 1].
- Neither sample recorded a usage/utilisation rate per 1 000 students stratified by race/population group [Objective 3].
- Neither sample reported the mean number of consultations required stratified by race/population group [Objective 4].

In developing (third world) countries no sample reported the race/population group-specific distribution of anxiety (neurotic) disorders.

In Southern African countries no sample reported the race/population-specific distribution of anxiety (neurotic) disorders.

It is extremely noteworthy (and somewhat anomalous) that the non-minority (White) sample recorded a proportion with anxiety (neurotic) disorder between 20 and 50 per cent of attendees while the corresponding minority (predominantly Black) student sample reported a proportion well less than 20 per cent of attendees (Alston, 1974, at New York University, USA).

B: Consequence

No commentary was provided by authors in the literature concerning the race/population group-specific consequences of this major diagnostic category.

(v) Other disorders

– Personality/character disorder

A: Country and objective-specific data

In developed (first world) countries this mental disorder is reported in two of the four samples (both obtained from New York University – Alston, 1974) reported in two articles.

- The proportion presenting in students varies between a maximum of 44,1 per cent (minority – mainly Black and Hispanic – students) to 32,4 per cent (non-minority – White – students). The resultant Black to White diagnostic attendance ratio is greater than 1,00:1 (1,36:1) [Objective 1].
- Neither sample recorded a usage/utilisation rate per 1 000 students stratified by race/population group [Objective 3].

- Neither sample reported the mean number of consultations required stratified by race/population group [Objective 4].

In developing (third world) countries no sample reported the race/population group-specific distribution of personality/character disorders.

In Southern African countries no sample reported the race/population-specific distribution of personality/character disorders.

B: Consequence

No commentary was provided by authors in the literature concerning the race/population group-specific consequences of this mental disorder.

– Psychosomatic/psychophysiological disorder

A: Country and objective-specific data

In developed (first world) countries this mental disorder is reported in only one of the four samples reported in two articles.

- The proportion presenting in students is restricted to 25,3 per cent (Gibbs, 1975, for Black students) [Objective 1].
- This sample recorded no usage/utilisation rate per 1 000 students stratified by race/population group [Objective 3].
- This sample reported no mean number of consultations required stratified by race/population group [Objective 4].

In developing (third world) countries no sample reported the race/population group-specific distribution of psychosomatic/psychophysiological disorders.

In Southern African countries no sample reported the race/population-specific distribution of psychosomatic/psychophysiological disorders.

Gibbs (1975) notes that psychosomatic/psychophysiological complaints in Black students attending the mental health service included sleep disturbances and symptoms involving the gastrointestinal, cardiopulmonary or central nervous systems. She observes that these complaints were most frequently present in students whose major defence mechanism was denial and who were unable to mobilise appropriate coping strategies to deal with their emotional problems. These complaints, like academic problems, were also more common in Black student attendees than their White counterparts.

B: Consequence

These findings would possibly seem to demonstrate (bearing in mind the inherent danger of generalising the results of a single study) that psychosomatic/psychophysiological disorders are fairly important complaints (when recognised) in relation to their proportion of total mental disorders in Black (especially) students presenting at college/university mental health services in developed (first world) countries.

– Psychotic disorder

A: Country and objective-specific data

In developed (first world) countries this mental disorder is reported in only one of the four samples reported in two articles.

- The proportion presenting in students is restricted to 5,9 per cent (Alston, 1974, for minority – mainly Black and Hispanic – students) [Objective 1].
- This sample recorded no usage/utilisation rate per 1 000 students stratified by race/population group [Objective 3].
- This sample reported no mean number of consultations required stratified by race/population group [Objective 4].

In developing (third world) countries no sample reported the race/population group-specific distribution of psychotic disorders.

In Southern African countries no sample reported the race/population-specific distribution of psychotic disorders.

B: Consequence

No commentary was provided by authors in the literature concerning the race/population group-specific consequences of this mental disorder.

– Sexual disorder

In neither developed (first world), developing (third world) or Southern African countries does any sample report sexual disorder as a presenting complaint.

(vi) Summary

The relative importance of the individual major diagnostic categories, V-codes and other mental disorders amongst students stratified by race/population group attending the various mental health facilities serving tertiary educational institutions in developed (first world) countries are listed below in Table 3.9 in the same order in which they appear in their subdivision. (There was no sample for developing (third world) countries and only one for Southern African countries.) These disorders are ranked primarily according to their appearance in the four samples detailed in the Literature Review although, where two (or more) clinical diagnoses appear in the identical number of samples, secondary ranking is according to the mean proportion recorded by each of these disorders presenting in students attending the various college/university mental health services.

Table 3.9 Relative importance of individual clinical diagnoses of students attending college/university mental health facilities stratified by race/population group.

Developed (first world) countries				
Diagnoses	**Appearance (ex 7 samples for Black or White student attendees and ex 14 samples for combined student attendees)**		**Mean proportion**	**Rank**
	n	**%**		
(a) Black student attendees				
Affective disorder	1	50,0	74,7	1
Adjustment disorder	1	50,0	26,5	5
V-codes (general)	0	0,0		11
- Relationship problem	1	50,0	48,3	2
- Family problem	1	50,0	24,1	7
- Academic problem	1	50,0	35,6	4
- Bereavement	0	0,0		11
- Unplanned pregnancy	1	50,0	4,5	10
Anxiety (neurotic) disorder	1	50,0	8,8	8
Other disorders				
- Personality disorder	1	50,0	44,1	3
- Psychosomatic disorder	1	50,0	25,3	6
- Psychotic disorder	1	50,0	5,9	9
- Sexual disorder	0	0,0		11
(b) White student attendees				
Affective disorder	1	50,0	13,0	5
Adjustment disorder	1	50,0	17,6	4
V-codes (general)	0	0,0		7
- Relationship problem	1	50,0	36,0	2
- Family problem	0	0,0		7
- Academic problem	1	50,0	6,0	6
- Bereavement	0	0,0		7
- Unplanned pregnancy	0	0,0		7
Anxiety (neurotic) disorder	1	50,0	41,2	1
Other disorders				
- Personality disorder	1	50,0	32,4	3
- Psychosomatic disorder	0	0,0		7
- Psychotic disorder	0	0,0		7
- Sexual disorder	0	0,0		7

(c) Combined student attendees				
Affective disorder	2	50,0	43,9	1
Adjustment disorder	2	50,0	22,1	5
V-codes (general)	0	0,0		11
- Relationship problem	2	50,0	42,2	2
- Family problem	1	25,0	12,1	8
- Academic problem	2	50,0	20,8	6
- Bereavement	0	0,0		11
- Unplanned pregnancy	1	25,0	2,3	10
Anxiety (neurotic) disorder	2	50,0	25,0	4
Other disorders				
- Personality disorder	2	50,0	38,3	3
- Psychosomatic disorder	1	25,0	12,7	7
- Psychotic disorder	1	25,0	3,0	9
- Sexual disorder	0	0,0		11

It must be noted that the failure of authors to document a clinical diagnosis in samples reported in the Literature Review does not necessarily mean that this mental disorder is unimportant and, therefore, of little concern to the student community.

3.3.3.3 Race/population group and gender

As this variable is only specifically reported in one of the 61 samples reported in 43 articles reviewing developed (first world) countries, it will only be briefly outlined in this subheading. A second study by Alston (1974) compares two opposing race/population group-specific cohorts (viz. minority – mainly Black and Hispanic students versus non-minority students) but controls non-minority student subjects by gender to match the profile of minority students, thereby rendering the study ineligible for race/population group and gender-specific analysis. No samples or articles featuring race/population group and gender are reported from either developing (third world) or Southern African countries. The most useful indicators to assess the race/population group and gender-specific profile of mental health service attendees are the Black male to Black female (BM:BF) ratio, the White male to White female (WM:WF) ratio and, especially, the Black male to White female (BM:WF) ratio and the Black female to White male (BF:WM) ratio recorded in Table 3.10. On the other hand, the race/population group and gender-specific profile of mental health service utilisation according to the mean number of consultations per student is assessed by the individual Black male, Black female, White male and White female-specific figures recorded in Table 3.10.

Table 3.10 Number of attendees, usage/utilisation rate per 1.000 students and number of consultations per patient according to race/population group and gender of students attending college/university mental health facilities.

Reference	Location	N	Details of sample	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
(a) Developed (first world) countries						
Gibbs (1975)	Stanford University, USA	3 604	Student attendees at Cowell Health Center from 09/69 to 06/72	BM: 41 (1,1%) BF: 46 (1,3%) [BM:BF = 0,89:1] WM: 1 975 (54,7%) WF: 1 542 (42,8%) [WM:WF = 1,28:1] BM:WM = 0,02:1 BF:WF = 0,03:1 BM:WF = 0,03:1 BF:WM = 0,02:1	N/S	BM: 4,00 BF: 5,43 [BM:BF = 0,74:1] WM: 4,37 WF: 4,17 [WM:WF = 1,04:1 BM:WM = 0,92:1] BF:WF = 1,30:1 BM:WF = 0,96:1 BF:WM = 1,24 :1
(b) Developing (third world) countries						
NO ENTRIES						
(c) Southern African countries						
NO ENTRIES						

Abbreviations appearing in Table 3.10:
N/S = Result not specified.
BM = Black male students.
BF = Black female students.
WM = White male students.
WF = White female students.

(a) Patient-specific data

(i) Country and objective-specific outline

A: Developed (first world) countries

– Attendees (Objective 1)

For attendee (Objective 1)-specific data it is noteworthy that the Black male to White male ratio and the Black female to White male ratio are slightly less (in numerical terms but circa 50 per cent in arithmetic terms) than that of the Black female to White female ratio and the Black male to White female ratio, respectively. These ratios are probably due to the lingering male predominance of the total student community served by the mental health service at the Cowell Health Center during the early 1970s being maintained across racial lines. This finding (like that of gender and race/population group outlined separately above) is probably related to the composition of the total student community rather than other factors affecting usage of these facilities by Black female students (especially).

– Usage/utilisation rates (Objective 3)

For usage/utilisation rate (Objective 3)-specific data no sample from developed (first world) countries reported race/population group and gender-specific usage/utilisation rates.

– Mean number of consultations (Objective 4)

For mean number of consultation (Objective 4)-specific data only one sample reported the mean number of consultations for Black male, Black female, White male and White female students (Gibbs, 1975). It is noteworthy that Black female students recorded the greatest mean number of consultations followed by White male, White female and Black male students. This finding coincides with the race/population group-specific results of Alston (1974) and Gibbs (1975) where Black students recorded a higher value than White students and the gender-specific results of Friedman and Coons (1969) where female students reported a higher figure than male students although Dunn et al. (1980) documented the opposite gender-specific trend.

[The commentary appearing in the second paragraph of section 3.3.2.1(a)(i) (Overall student attendees) outlining conditions likely to affect the majority of developed (first world) college/university mental health services should be considered when these race/population group and gender-specific findings are compared to those detailed for developing (third world) and Southern African countries.]

B: Developing (third world) countries

For neither attendee (Objective 1)-specific data, usage/utilisation rate (Objective 3)-specific data or mean number of consultation (Objective 4)-specific data does any sample report race/population group and gender-specific findings.

C: Southern African countries

For neither attendee (Objective 1)-specific data, usage/utilisation rate (Objective 3)-specific data or mean number of consultation (Objective 4)-specific data does any sample report race/population group and gender-specific findings.

(ii) Explanation

Fleming (1984) studied a sample of 3 000 Black and White college students at colleges in the United States and concluded that there are persistent differences in the college experiences of Black males and females. Amongst Black students, the author found that females: (i) were more anxious in competition, (ii) felt less competent, and (iii) were less assertive than males. Likewise, Smith (1988) claimed that Black female

students in America engage in more self-depreciation and often have low occupational aspirations even if they have high grades. These factors mean that Black females are at a distinct disadvantage compared to Black males. Allen (1992) concludes that Black women were shown to encounter challenges and problems arising from their unique identity in two (gender and race), if not three (gender, race and class) discriminated categories. The challenges, according to the author, often represented serious barriers to Black women's satisfaction with and achievement in college/university. Therefore, historically disadvantaged Black female students would appear to be doubly predisposed to mental disorders presenting as psychological or psychiatric complaints at the college/university mental health service than their generally historically advantaged non-Black, non-female (viz. male) peers.

According to Mokwena (1992) intrinsic to South African Black communities is the fact that Black women bear the brunt of a cumbersome domestic economy which involves virtual domestic servitude. The author notes that this tradition reinforces their subservient role as women, and in the long run interferes with their ability to succeed in spheres beyond the domestic arena. Thus a greater percentage of women fail to acquire tertiary level education than men. However, any Black female who does attend college/university may still be subject to such household commitments – especially if she is a mature student with a family – which may, in turn, interfere with her studies.

(b) Clinical/diagnostic-specific data

Neither of the two (including Alston, 1974) developed (first world) country samples detailing race/population group and gender-specific findings reported in the literature record clinical/diagnostic-specific data.

3.3.3.4 Age

This variable in the form of either mean age, age range or age distribution is the third most commonly reported one in the literature reviewing developed (first world) countries (13 of the 61 samples reported in 43 articles). It is also documented in two of the six samples recorded in four articles from developing (third world) countries and four of the 19 samples obtained from five Southern African universities. The most useful indicator, for comparative purposes, to assess the age-specific profile of mental health service attendees (appearing in ten samples) is mean age. Therefore, this subheading will confine itself to discussing the mean ages recorded in Table 3.11. However, the age-specific profile of mental health service utilisation according to usage/utilisation rate per 1 000 students and the mean number of consultations per student is not documented for any of these samples except for two values for mean age by number of consultations provided by Jenkins et al. (1986).

Table 3.11 Number of attendees, usage/utilisation rate per 1 000 students and number of consultations per patient according to age of students attending college/university mental health facilities.

Reference	Location	N	Details of sample	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
(a) Developed (first world) countries						
Boor (1975)	Fort Hays Kansas State College, USA	84[1]	Student attendees from 09/70 to 01/74	Mean: 22,1	N/S	N/S
Braaten and Darling (1961)	Cornell University, USA	639	Student attendees from 07/59 to 06/60	Distribution: ≤17: 57 (8,9%) 18-21: 403 (63,1%) ≥22: 179 (28,0%)	N/S	N/S
Dunn et al. (1980)	College Mental Health Center, Boston, USA	814[2]	Student attendees from 09/75 to 06/77	Mean: 22	N/S	N/S
Fox and Reifler (1967)	University of North Carolina at Chapel Hill, USA	2 075	Student attendees from 06/56 to 05/65	Range: 16-58	N/S	N/S
Gibbs (1975)	Stanford University, USA	63	Black student attendees at Cowell Health Center from 09/69 to 06/72	Undergraduates: Mean: 19 Range: 17-32 Postgraduates: Mean: 23 Range: 21-38	N/S N/S	N/S N/S
Hersch et al. (1983)	University of Massachusetts at Amherst, USA	200	Student attendees from 10/80 to 05/81	Mean: 22,5 Range: 17-44	N/S	N/S
Horenstein (1976)	University of Kansas, USA	122	Student attendees from 12/70 to 05/72	Mean: 21,4 Range: 16 to 38	N/S	N/S
Jenkins et al. (1986)	Anonymous large midwestern university, USA	414[3]	Student attendees from 09/81 to 06/82	Mean: 21,2	N/S	Mean age by number of consultations: 1-2: 22,23 ≥3: 23,94
Sharp and Marra (1971)	University of Wyoming, USA	594	Student attendees from 07/67 to 06/68	Distribution: 17-19: 270 (45,5%) 20-29: 282 (47,5%) 30-39: 34 (5,7%) ≥40: 8 (1,3%)	N/S	N/S
Stangler and Printz (1980)	University of Washington, USA	500	Student attendees over unspecified 5 month period	Mean: 25,4 Range: 17 to 53	N/S	N/S
Walters (1970)	University of Illinois, USA	4 547	Student attendees from 09/58 to 06/68	Distribution: 18-21: 2 501 (55,0%) 18-25: 3 683 (81,0%) ≥30: 336 (7,4%)	N/S	N/S
Wogan and Amdur (1974)	University of Connecticut, USA	188[4] 200[5]	Student attendees from 09/64 to 06/65 Student attendees from 09/71 to 06/72	Mean: 19,8 Mean: 20,86	N/S N/S	N/S N/S
(b) Developing (third world) countries						
German and Arya (1969)	Makerere University College, Uganda	121	Student attendees from 10/66 to 06/67	Range: 18-31 Distribution: 21-25: 85 (70,2%) Other: 36 (29,8%)	N/S	N/S
Wig et al. (1971)	Panjab University, India	68	Student attendees from 09/66 to 06/67	Mean: 21,7 Range: 16-26	N/S	N/S

Reference	Location	N	Details of sample	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
(c) Southern African countries						
Mupunga (1997)	University of Zimbabwe	473	Student attendees from 01-12/96	Distribution: 19-25: 263 (55,6%) 26-32: 75 (15,9%) ≥33: 135 (28,5%)	N/S	N/S
Naidoo (1997)	University of the Western Cape	1 004[7]	Student attendees from 01-12/95	Mean: 23,2 Range: 14-578 Distribution: ≤17: 24 (3,1%) 18: 71 (9,2%) 19: 72 (9,3%) 20: 84 (10,9%) 21: 83 (10,8%) 22: 84 (10,9%) 23: 69 (8,9%) 24: 54 (7,0%) 25: 40 (5,2%) 26: 37 (4,8%) 27: 31 (4,0%) 28: 22 (2,9%) 29: 24 (3,1%) ≥30: 76 (9,9%) Missing: 233	N/S	N/S
		722[8]	Student attendees from 01-12/96	Mean: 23,8 Range: 13-5410 Distribution: ≤17: 23 (3,8%) 18: 36 (6,0%) 19: 53 (8,8%) 20: 64 (10,6%) 21: 61 (10,1%) 22: 60 (10,0%) 23: 58 (9,6%) 24: 45 (7,5%) 25: 36 (6,0%) 26: 24 (4,0%) 27: 26 (4,3%) 28: 20 (3,3%) 29: 23 (3,8%) ≥30: 74 (12,3%) Missing: 119	N/S	N/S
Venter (1997)	University of the Free State	2 576	Student attendees from 01-12/96	Mean: 20	N/S	N/S

Footnotes

1. The figures quoted above represent a randomly selected sample of 84 cases from the entire caseload (exact number of cases is not mentioned in the article) of the Psychological Service Center during the 3+ year study period.
2. The entire case load of the College Mental Health Center for 1975 to 1977 was 847 cases but the authors excluded 33 cases due to various clerical reasons to leave a sample of 814 cases for which nearly complete data were available.
3. The entire case load of the counselling centre for 1981/82 was 469 cases but the authors excluded 55 cases because of extraneous factors which affected the duration of counselling (viz. number of interviews/consultations) – which is the primary focus of the article, to leave a sample of 414 cases.
4. The entire case load of the Student Mental Health Service for 1964/65 was 368 cases but the authors excluded 180 cases which, inter alia, had been seen in previous years or were administrative referrals, to leave a sample of 188 cases.
5. The entire case load of the Student Mental Health Service for 1971/72 was 1 052 cases but the authors employed a stratified sample of 200 cases divided proportionately by the month in which the patient applied to the clinic for the first time.
6. The authors note that the increase in mean age of attendees can probably be accounted for as a result of changes in the total student population which has seen a gradual increase both in the number of graduate students and in the number of older students transferring into the University from other colleges/universities from 1964/65 to 1971/72.
7. The entire caseload of the Centre for Student Counselling for 1995 was 1 280 cases but the correspondent excluded 276 cases due to the lack of client checklists (completed voluntarily) to leave a sample of 1 004 cases for which completed checklists were available.
8. The Center for Student Counselling conducts outreach programmes to schools from the community which constituted 5,1 per cent (N=51) of 1995 attendees for which completed checklists were available.

9. The entire caseload of the Centre for Student Counselling for 1996 was 1 276 cases but the correspondent excluded 554 cases due to the lack of client checklists (completed voluntarily) to leave a sample of 722 cases for which completed checklists were available.

10. The Center for Student Counselling conducts outreach programmes to schools from the community which constituted 3,3 per cent (N=24) of 1996 attendees for which completed checklists were available.

Abbreviations appearing in Table 3.11:
N/S = Result not specified.

(a) Patient-specific data

(i) Country and objective-specific outline

A: Developed (first world) countries

– Attendees (Objective 1)

For attendee (Objective 1)-specific data it is noteworthy that the five samples recording a mean student attendance age greater than or equal to 22 years do not appear to involve students attending the mental health services of their respective colleges/universities during any particular decade as one partly spans the 1960s (Gibbs, 1975, involving postgraduate Black students), four span the 1970s and one spans the 1980s (Hersch, Nazario and Backus, 1983). Likewise, a similar pattern emerges for the five samples recording a mean student attendance age less than 22 years as two span the 1960s (including Gibbs, 1975, involving undergraduate Black students), three span the 1970s and one spans the 1980s (Jenkins, Fuqua and Blum, 1986).

This situation is clearly in contrast to that previously reported for gender and race/population group, respectively, where specific time trends related to changes in the gender and race-specific composition of the total student community are evident. Therefore, it would appear that these two variables (unlike age) are important demographic indicators of social change as reflected in this altering pattern of students attending college/university in developed (first world) countries.

– Usage/utilisation rates (Objective 3)

For usage/utilisation rate (Objective 3)-specific data no sample from developed (first world) countries reported age-specific usage/utilisation rates.

– Mean number of consultations (Objective 4)

For mean number of consultation (Objective 4)-specific data no sample (except for two values for mean age by number of consultations provided by Jenkins, Fuqua and Blum, 1976) from developed (first world) countries reported age-specific mean number of consultations.

[The commentary appearing in the second paragraph of section 3.3.2.1(a)(i) (Overall student attendees) outlining conditions likely to affect the majority of developed (first world) college/university mental health services should be considered when these age-specific findings are compared to those detailed for developing (third world) and Southern African countries.]

B: Developing (third world) countries

– Attendees (Objective 1)

Only one sample reported the mean student attendance age (Wig, Nagpal and Khanna, 1971, at Panjab University, India). This figure is compatible with those obtained from developed (first world) countries where five (50,0 per cent) of samples recorded a mean student attendance age of less than 22 years. However, it is difficult to contextualise the significance of this finding from the results of only one study.

– Usage/utilisation rates (Objective 3)

For usage/utilisation rate (Objective 3)-specific data no sample from developing (third world) countries reported age-specific usage/utilisation rates.

– Mean number of consultations (Objective 4)

For mean number of consultation (Objective 4)-specific data no sample from developing (third world) countries reported age-specific mean number of consultations.

[The commentary appearing in the second paragraph of section 3.3.2.1(b)(i) (Overall student attendees) outlining conditions likely to affect the majority of developing (third world) college/university mental health services should be considered when these age-specific findings are compared to those detailed for developed (first world) and Southern African countries.]

C: Southern African countries

– Attendees (Objective 1)

For attendee (Objective 1)-specific data only two samples from the University of the Western Cape reported the mean student attendance age (Naidoo, 1997). These figures are both also compatible with those obtained from developed (first world) countries where five (50,0 per cent) of samples recorded a mean student attendance age of greater than of equal to 22 years but slightly higher than that documented by Wig,

Nagpal and Khanna (1971) in India. However, again, it is not possible to contextualise the relevance of these findings from the results of such a limited number of studies.

– Usage/utilisation rates (Objective 3)

For usage/utilisation rate (Objective 3)-specific data no sample from Southern African countries reported age-specific usage/utilisation rates.

– Mean number of consultations (Objective 4)

For mean number of consultation (Objective 4)-specific data no sample from Southern African countries reported age-specific mean number of consultations.

[The commentary appearing in the second paragraph of section 3.3.2.1(c)(i) (Overall student attendees) outlining conditions likely to affect various Southern African university mental health services should be considered when these age-specific findings are compared to those detailed for developed (first world) and developing (third world) countries.]

(ii) Explanation

A: Usage/utilisation rates (Objective 3)

Sanders (1948), Phillip and Cullin (1955), Flemming (1959), Schonell (1962) and Barnett and Lewis (1963) all in Miller (1970) state that younger students were more able in their studies and obtained better degree results than older students. However, Mechanic and Greenley (1976) report that the students with greater psychological distress are those who are relatively young as compared with their classmates so that the young college/university student who is intellectually advanced, but who may be more "socially immature", may face special mental health problems. Inversely, a positive relationship has been reported between age and coping (Michelson, 1991) so that older students may be better equipped to deal with environmental stress (Malefo, 1995). Family responsibility and/or obligations serve as a driving force behind older students' determination to succeed in and complete their studies (Nettles, 1988). In addition, low social integration whereby older students are less likely to participate in campus social activities could also contribute to slightly higher academic performance (Malefo, 1995).

Shochet (1986) notes that historically disadvantaged students admitted to the University of the Witwatersrand are often much older than the advantaged. The reason for this is that often these students have to interrupt their studies for financial considerations or because of political factors such as school boycotts. Likewise, Selikow (1994) notes that due to social and financial conditions many of these students

are only able to register at college or university after fulfilling family commitments or working first to save money, and are consequently older than their White counterparts. They also often have children to support.

However, older non-traditionally aged students (many of whom are historically disadvantaged Black students) are often subject to the same increased social and familial responsibilities listed previously in the corresponding subdivision under race/population group than their younger counterparts. Likewise, these added responsibilities must predispose these students to a host of adjustment disorders, inter alia, leading to an increased number of mental disorders presenting at the college/university mental health service for evaluation and/or therapeutic intervention. In addition, older non-traditionally aged students, who comprise a minority of the total (undergraduate) student community, are often considerably older than their peers and, consequently, may find it difficult to relate to them. This could result in diminished interaction with fellow students and a feeling of social isolation which may, in turn, lead to a sense of alienation predisposing these students to affective disorders, inter alia, leading to an increased number of mental disorders presenting at the college/university mental health service for evaluation and/or therapeutic intervention.

Hybertson et al. (1992) categorise students whose age is greater than 25 years as non-traditional age students. Programme managers (and therapists) are challenged to provide services and support that are developmentally relevant to their students/patients and consistent with their students' level of integration into the campus community. It is possible, as the individual ages and assumes an increasing number of adult roles and responsibilities, that environmental factors – job demands (for part-time students), financial obligations, family responsibilities – intrude upon the individual's opportunities to make the choices and to exercise the effort needed to achieve or maintain (mental) wellness. Life experiences for the older student are different from those of the younger student.

B: Mean number of consultations (Objective 4)

Jenkins, Fuqua and Blum (1986) report that older students were more likely to stay in treatment longer – this is in keeping with their finding that third and fourth year students were more likely to be involved in longer treatment than first and second year students.

(b) Clinical/diagnostic-specific data

None of the 19 (13 in developed (first world) countries, two in developing (third world) countries and four in Southern African countries) samples detailing age-specific findings reported in the literature records clinical/diagnostic-specific data.

3.3.3.5 Language

This variable is not reported in either the literature reviewing developed (first world) countries (none of the 61 samples reported in 43 articles), developing (third world) countries (none of the six samples recorded in four articles) or Southern African countries (none of the 19 samples obtained from five universities). This complete absence of any descriptive data detailing language-specific differences between students attending the college/university mental health service suggests that there is currently a serious gap in the student mental health literature. The lack of such research in a cosmopolitan, multilingual developed (first world) country such as the USA is surprising and suggests that university authorities (including researchers) have underestimated the potential importance of this variable. Although English is the predominant and only official language in the USA (whereas, by contrast, South Africa now has 11 official languages), there are substantial non-English first language speaking minorities in this highly developed country, e.g. Spanish-speaking immigrants from Mexico. These students are in a similar position to the local historically disadvantaged, non-English first language speaking Black students attending an historically Eurocentric university such as the University of Cape Town.

(a) Overview

Shochet (1986) notes that tests of English language proficiency have become increasingly important given the number of foreign applicants who apply to English colleges/universities or applicants who do not have English as their first language. According to the author, this has important implications locally as many of the historically disadvantaged students attending the University of Cape Town do not speak English as their first language, even though English was their medium of instruction at secondary school. A study conducted in Florida on Cuban Americans by Friedenberg and Curry (1981) found a significant correlation between language proficiency and academic success.

Indeed, Ngwenya (1990) identifies four language skills that, if not fully developed may impede the performance of first year (freshman/fresher) second language English-speaking students at colleges/universities. These are: (i) listening, and (ii) reading (receptive and decoding skills): (iii) speaking, and (iv) writing (productive or encoding skills). A lack of study skills and poor conceptual skills can also contribute to poor academic performance. Starfield (1989), drawing on the work of Cummins (1984), differentiates between a range of contextual support and cognitive involvement in communicative activities to explain why having English as a second language presents problems for students in relation to writing. Skills which are context-embedded and cognitively undemanding are classified as BICS (basic interpersonal communicative skills). On the other hand, skills which are cognitively demanding and context-reduced are labelled as CALP (cognitive academic language proficiency). For the latter the student is solely dependent on the written word for meaning. Starfield (1989) notes that many Black students are proficient in BICS but not necessarily in CALP and are, therefore, often articulate but struggle with written assignments and academic reading. On the other hand, Selikow (1994) notes that many Black students felt disadvantaged in

relation to having English as a second language not because they feel that their English is inadequate but rather because they feel that, relative to their White counterparts, their English is poor.

Therefore the non-English first language speaking student (the majority of whom are historically disadvantaged Black students) is not only subject to the same academic challenges and demands of university life as his/her English first language speaking peer but also hindered by the burden of studying in, what is to him/her, a foreign language. Consequently, all things being equal (which clearly they are not), this student is required to study even harder than his/her (generally) historically advantaged non-Black peers in order to achieve a comparable academic performance. When this performance is further negatively affected by the legacy of an inadequate educational background, these students will be predisposed to academic-related stress and resultant anxiety disorders, inter alia, leading to an increased number of mental disorders presenting at the college/university mental health service for evaluation and/or therapeutic intervention.

3.3.4 Academic Variables

The selected academic variables investigated in the UCT-SHS study are faculty, level of study (viz. undergraduate versus postgraduate students) and year of study.

3.3.4.1 Faculty

This variable in the form of either numbers and percentages or qualitative assessments is the sixth most commonly reported one in the literature reviewing developed (first world) countries (five of the 61 samples reported in 43 articles). It is also documented in two of the 19 samples obtained from five Southern African universities. The most useful indicator, for comparative purposes, to assess the faculty-specific profile of mental health service attendees is to note which faculties are well or overrepresented and those that are poorly or underrepresented recorded in Table 3.12. On the other hand, the faculty-specific profile of mental health service utilisation according to usage/utilisation rates per 1 000 students is assessed by the individual faculty or department-specific figures recorded in Table 3.12.

Table 3.12 Number of attendees, usage/utilisation rate per 1 000 students and number of consultations per patient according to faculty of students attending college/university mental health facilities.

Reference	Location	N	Details of sample	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
(a) Developed (first world) countries						
Boor (1975)	Fort Hays Kansas State College, USA	84[1]	Student attendees from 09/70 to 01/74	Arts: 16 (19,0%)[2] Commerce: 14 (16,7%) Education: 13 (15,5%) Medicine: 9 (10,7%) Music: 5 (6,0%) Science: 8 (9,5%) SS & H: 12 (14,3%) Other: 7 (8,3%)	N/S	N/S
Braaten and Darling (1961)	Cornell University, USA	639	Student attendees from 07/59 to 06/60	Overrepresented: Agriculture Arts & Sciences Education Underrepresented: Engineering Home Economics Veterinary Medicine	N/S	N/S
Dann (1964)	University College, Swansea, UK	193	Undergraduate student attendees entering College in 1958, 59 and 60	Psychology: 21 (10,9%) Non-Psychology: 172 (89,1%)	Psychology: 100,5[3] [-] Non-Psychology: 42,0 [-]	N/S
Dunn et al. (1980)	College Mental Health Center, Boston, USA	814[4]	Student attendees from 09/75 to 06/77	Arts: 180 (22,1%)[5] Commerce: 179 (22,0%) Medicine: 155 (19,0%) Science & Engineering: 41 (5,0%) SS & H: 224 (27,5%) Other: 35 (4,3%)	N/S	N/S
Maclay (1967)	Birmingham University, UK	146	Student attendees from 01/64 to 12/65	N/S	Arts: 47,0[6] [-] Dentistry: 4,0 [-] Medicine: 47,0[6] [-] Other: N/S [-]	N/S
Schwarz (1964)	University of British Columbia, Canada	206	Student attendees from 09/62 to 05/63	N/S	Agriculture: 15,7 [1,05] Architecture: 12,2 [0,81] Arts & Science: 17,7 [1,18] Commerce: 14,6 [0,97] Education: 10,4 [0,69] Engineering: 12,9 [0,86] Law: 13,3 [0,89] Medicine: 19,2 [1,28] Nursing: 69,2 [4,61] Pharmacy: 6,8 [0,45] Rehabilitation: 57,1 [3,81] SS & H: 25,7 [1,71]	N/S
Sharp and Marra (1971)	University of Wyoming, USA	594	Student attendees from 07/67 to 06/68	Agriculture: 28 (4,7%) Arts & Science: 271 (45,6%) Commerce and Industry: 66 (11,1%) Education: 134 (22,5%) Engineering: 75 (12,6%) Law: 3 (0,5%) Nursing: 14 (2,4%) Pharmacy: 3 (0,5%)	N/S	N/S

Reference	Location	N	Details of sample	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
Wogan and Amdur (1974)	University of Connecticut, USA	388[7]	Student attendees from 09/64 to 06/65 and 09/71 to 06/72	Overrepresented: Arts Science Underrepresented: Agriculture Business Engineering	N/S	N/S
(b) Developing (third world) countries						
NO ENTRIES						
(c) Southern African countries						
Naidoo (1997)	University of the Western Cape	1 004[8]	Student attendees from 01-12/95	Arts: 323 (39,1%) Community & Health: 139 (16,8%) Dentistry: 1 (0,1%) Economics & Management: 102 (12,3%) Education: 56 (6,8%) Law: 93 (11,3%) Science: 108 (13,1%) Theology & Religion: 4 (0,5%) Missing: 178	Arts: 55,2 [N/A][9] Community & Health: 104,0 [N/A][9] Dentistry: 5,2 [N/A][9] Economics & Management: 36,2 [N/A][9] Education: 50,0 [N/A][9] Law: 61,9 [N/A][9] Science: 65,3 [N/A][9] Theology & Religion: 16,3 [N/A][9] Missing: 178	N/S
		722[10]	Student attendees from 01-12/96	Arts: 239 (39,5%) Community & Health: 76 (12,6%) Dentistry: 5 (0,8%) Economic & Management: 126 (20,8%) Education: 25 (4,1%) Law: 62 (10,2%) Science: 63 (10,4%) Theology & Religion: 9 (1,5%) Missing: 117	Arts: 46,3 [N/A][11] Community & Health: 60,7 [N/A][11] Dentistry: 25,1 [N/A][11] Economic & Management: 46,3 [N/A][11] Education: 29,5 [N/A][11] Law: 44,7 [N/A][11] Science: 44,0 [N/A][11] Theology & Religion: 41,1 [N/A][11] Missing: 117	N/S

Footnotes

1. The figures quoted above represent a randomly selected sample of 84 cases from the entire caseload (exact number of cases is not mentioned in the article) of the Psychological Service Center during the 3+ year study period.
2. The course majors taken by attendees of the Psychological Service Center as reported in the article have been arranged to correspond to the faculties available at the University of Cape Town.
3. The author states that these usage/utilisation rates are very highly significant ($\chi^2 = 14,34$; no p-value) and confirms the general impression amongst doctors that students and ex-students of psychology suffer more from psychiatric disorders than do the rest of the population.
4. The entire case load of the College Mental Health Center from 1975 to 1977 was 847 cases but the authors excluded 33 cases due to various clerical reasons to leave a sample of 814 cases for which nearly complete data were available.
5. The faculties to which attendees of the College Mental Health Center were registered have been arranged to correspond to the faculties available at the University of Cape Town.
6. The author states that the usage/utilisation rates for undergraduate Arts students were very highly significant ($\chi^2 = 19,72$; $\rho < 0,001$) and those for Medical students were highly significant ($\chi^2 = 8,02$; $\rho < 0,001$).
7. The entire case load of the Student Mental Health Service for 1964/65 was 368 cases but the authors excluded 180 cases which, inter alia, had been seen in previous years or were administrative referrals, to leave a sample of 188 cases while for 1971/72 it was 1 052 cases but the authors employed a stratified sample of 200 cases divided proportionately by the month in which the patient applied to the clinic for the first time.
8. The entire caseload of the Center for Student Counseling for 1995 was 1 280 cases but the correspondent excluded 276 cases due to the lack of client checklists (completed voluntarily) to leave a sample of 1 004 cases for which completed checklists were available.
9. Due to the high number of missing responses recorded (178 ex 1 004 or 17,7 per cent of attendees), it is not possible to calculate utilisation ratios for Arts, Community and Health, Dentistry, Economics and Management, Education, Law, Science and Theology and Religion faculty student attendees.
10. The entire caseload of the Center for Student Counseling for 1996 was 1 276 cases but the correspondent excluded 554 cases due to the lack of client checklists (completed voluntarily) to leave a sample of 722 cases for which completed checklists were available.

11. Due to the high number of missing responses recorded (117 ex 722 or 16,2 per cent of attendees), it is not possible to calculate utilisation ratios for Arts, Community and Health, Dentistry, Economics and Management, Education, Law, Science and Theology and Religion faculty student attendees.

Abbreviations appearing in Table 3.12:
N/S = Result not specified.
N/A = Result not applicable.
SS&H = Social Science and Humanities faculty.

(a) Patient-specific data

(i) Country and objective-specific outline

A: Developed (first world) countries

– Attendees (Objective 1)

For attendee (Objective 1)-specific data it is noteworthy that the only faculty that is listed in all five samples as providing an excessive number of attendees is the Arts faculty while Education and Science faculty students each appear in two of the four (50 per cent) samples. Other faculties that are well or overrepresented in these samples are Agriculture, Commerce and Social Science and Humanities. On the other hand, no faculty is listed in all five samples as providing an insufficient number of attendees while Medical (although the inclusion for Dunn et al., 1980, is marginal) and Science faculty students each appear in two of the four (50 per cent) samples. Other faculties that are poorly or underrepresented in these samples are Agriculture, Business, Home economics, Music and Veterinary medicine.

In conclusion, Arts and Education faculties appear to be either well or overrepresented while Engineering and (to a lesser degree) Medicine appear to be either poorly or underrepresented. Science (especially) and Agriculture faculties appear in both lists suggesting some variation in their students' attendance patterns at the mental health services of their respective colleges/universities. In addition, a study reported by Dann (1964) suggests that psychology students are well represented relative to students registered with other faculties/departments.

– Usage/utilisation rates (Objective 3)

For usage/utilisation rate (Objective 3)-specific data it is noteworthy that only one of the 17 (5,9 per cent) departments/faculties listed in the four samples in which the usage/utilisation rate is reported (psychology students from Dann, 1964), recorded a usage/utilisation rate greater than 100 attendees per 1 000 students. (This figure is much less than that previously recorded for the overall usage/utilisation rate where five (12,3 per cent) samples exceeded this value. However, 12 or 70,6 per cent of the departments/faculties are derived from one sample - Schwarz, 1964.) A further one (5,9 per cent) of the departments/faculties (nursing students from Schwarz, 1964) accounted for usage/utilisation rates between 60 and 100 attendees per 1 000 students. (This figure is also significantly lower than those previously recorded for the overall

usage/utilisation rate where 18 (45,0 per cent) occupied this range. However, the unrepresentative nature of the faculty-specific sample is noted.) A further five (29,4 per cent) departments/faculties reported usage/utilisation rates between 20 and 60 attendees per 1 000 students with four (23,5 per cent) recording rates between 40 and 60 attendees per 1 000 students. (The former figure is again lower than those previously recorded for the overall usage/utilisation rate where 17 (42,5 per cent) fell into this range. Again, the unrepresentative nature of the faculty-specific sample is noted.) The greatest number of documented departments/faculties (11 or 64,7 per cent) accounted for usage/utilisation rates less than 20 attendees per 1 000 students. (This figure, unlike the above quoted ranges – except between 40 and 60, is substantially greater than that previously recorded for the overall usage/utilisation rate where seven (17,5 per cent) samples were less than this value. The generally low values recorded by Schwarz, 1964, engender this situation.) Therefore less than 20 (especially between 10 and 20) would appear to represent the median range of the documented faculty-specific student attendance at the mental health service with all the preceding departments/faculties corresponding to the upper range of values (greater than 20) and those below 10 corresponding to the lower range. (This median range for documented departments/faculties is much lower than that previously recorded for the overall usage/utilisation rate which is between 40 and 60. However, a more complete and representative group of samples that are not skewed by the low values recorded by Schwarz, 1964, would rectify this aberration.)

Where overall usage/utilisation rates together with faculty-specific usage/utilisation rates are recorded in the literature reviewed, it has been possible to insert additional utilisation ratios (Bridges-Webb et al., 1992) to the basic results obtained from the original article already documented in Table 3.12. These ratios are calculated by dividing the individual faculty student usage/utilisation rates by the overall usage/utilisation rate. They are displayed in square brackets adjacent to the documented usage/utilisation rates. Only one sample (Schwarz, 1964) included the requisite data to determine utilisation ratios which demonstrate that Agriculture, Arts and Science, Medicine and Social Science and Humanities faculty students reported utilisation ratios between 1,00 and 2,00 while only Nursing and Rehabilitation department students recorded values greater than 3,80. Therefore, these results imply an overrepresentation of these student attendees (especially the latter two subsets) in developed (first world) college/university mental health service presentations.

– Mean number of consultations (Objective 4)

For mean number of consultation (Objective 4)-specific data no sample from developed (first world) countries reported faculty-specific mean number of consultations.

[The commentary appearing in the second paragraph of section 3.3.2.1(a)(i) (Overall student attendees) outlining conditions likely to affect the majority of developed (first world) college/university mental health services should be considered when these faculty-specific findings are compared to those detailed for developing (third world) and Southern African countries.]

B: Developing (third world) countries

For neither attendee (Objective 1)-specific data, usage/utilisation rate (Objective 3)-specific data or mean number of consultation (Objective 4)-specific data does any sample report faculty-specific findings.

C: Southern African countries

– Attendees (Objective 1)

For attendee (Objective 1)-specific data neither of the two samples from the University of the Western Cape (Naidoo, 1997) reported which faculties are either well or overrepresented or poorly or underrepresented amongst mental health service attendees.

– Usage/utilisation rates (Objective 3)

For usage/utilisation rate (Objective 3)-specific data it can be observed that only one of the 16 (6,3 per cent) faculties listed in the two samples from the University of the Western Cape in which the usage/utilisation rate is reported (Community and Health faculty students from Naidoo, 1997), recorded a usage/utilisation rate greater than 100 attendees per 1 000 students. A further three (18,8 per cent) of the faculties accounted for usage/utilisation rates between 60 and 100 attendees per 1 000 students. The greatest number of documented faculties (10 or 62,5 per cent) reported usage/utilisation rates between 20 and 60 attendees per 1 000 students with seven (43,8 per cent) recording rates between 40 and 60 attendees per 1 000 students. Therefore between 20 and 60 (especially 40 and 60) would appear to represent the median range of faculty-specific attendance at the mental health service with the preceding four faculties corresponding to the upper range of values (greater than 60) and those mentioned below corresponding to the lower range (less than 20). The remaining two (12,5 per cent) faculties recorded usage/utilisation rates less than 20 attendees per 1 000 students.

– Mean number of consultations (Objective 4)

For mean number of consultation (Objective 4)-specific data no sample from Southern African countries reported faculty-specific mean number of consultations.

[The commentary appearing in the second paragraph of section 3.3.2.1(c)(i) (Overall student attendees) outlining conditions likely to affect various Southern African university mental health services should be considered when these faculty-specific findings are compared to those detailed for developed (first world) and developing (third world) countries.]

(ii) Explanation

A: Attendees (Objective 1)

Boor (1975), in a study of students attending the Psychological Services Center at Fort Hays Kansas State College, reports that, by comprising 10,7 per cent of clinic attendees, arts majors were significantly over-represented when compared to their 2,4 per cent composition of a randomly selected non-attendee control group ($z = 2,17$; $\rho < 0,03$). In addition, by comprising 9,5 per cent of clinic attendees, psychology majors were also significantly over-represented when compared to their 1,2 per cent composition of a randomly selected non-attendee control group ($z = 2,40$; $\rho < 0,02$). The author states that, for arts students, persons with propensities toward relatively abstract, subjective ideation are more likely to experience personal adjustment difficulties or at least be more likely to seek help for these difficulties than are persons with propensities towards cognitions related to more concrete, objective concepts. It is suggested, for psychology students, that persons with relatively marked personal adjustment problems tend to select psychology as a major, perhaps in an attempt to understand their own problems.

Therefore Arts, Music and Social Science and Humanities faculty students are inclined to be creative and "artistic" by inclination, often undertaking non-vocational courses while the remaining non-Arts, Music and Social Science and Humanities faculty students are inclined to be more "scientific" in nature, undertaking mainly vocational courses leading to professional qualifications. This faculty-specific difference in academic focus and career direction is, therefore, possibly accompanied by philosophical differences that might enable Arts, Music and Social Science and Humanities students to more easily recognise and more willingly react to various psychological or psychiatric complaints leading to an increased number of mental disorders presenting at the college/university mental health service for evaluation and/or therapeutic intervention. In addition, Arts, Music and Social Science and Humanities faculties offer mainly non-vocational courses which are (on the whole) less structured and didactic than those offered in the remaining non-Arts, Music and Social Science and Humanities faculties and are, therefore, possibly accompanied by enhanced levels of academic uncertainty amongst students. This uncertainty could predispose these students to academic-related stress and resultant anxiety disorders, inter alia, leading to an increased number of mental disorders presenting at the college/university mental health service for evaluation and/or therapeutic intervention.

B: Usage/utilisation rates (Objective 3)

Dann (1964) notes that the prevalence of psychiatric complaints for psychology students was more than double that of non-psychology students. This difference is apparently statistically significant ($\chi 2 = 14,34$; p-value not provided) and confirms the belief of many doctors that students and ex-students of psychology suffer more from psychiatric complaints than do the rest of the population. The gender-specific breakdown indicates that there is a greater prevalence of psychiatric disorder among male psychology students than

male non-psychology students, but there is insufficient evidence to establish such a relationship for the female students. In order to explain this finding, the author suggests that it is quite possible that psychology students were more psychiatrically sophisticated and more ready to refer symptoms they supposed to be psychiatric in origin to the doctor. In addition, Schwarz (1964) reports that the four faculties (departments) in his study that have some kind of psychiatric orientation included in their course (nursing, rehabilitation medicine, social work and medicine) provided the highest usage/utilisation rates for students seeking psychiatric assessment and treatment. The author notes that the students in these faculties (departments) were not "sicker" than those in other faculties (departments) but rather ascribes the psychiatric training given to these students making them more aware of their problems and of the facilities for treatment.

On the other hand, Braaten and Darling (1961) suggest that the lower prevalence of mental health service attendances of engineering students relative to arts students is due to a higher threshold for referral because engineering students, on average, were less aware of human psychodynamics than arts students.

(b) Clinical/diagnostic-specific data

Only one of the seven (five in developed (first world) countries and two in Southern African countries) samples detailing faculty-specific findings reported in the literature records clinical/diagnostic-specific data.

Nicholi (1967), in a study of 1 454 Harvard College undergraduate student psychiatric dropouts who had consulted a psychiatrist with a specific psychiatric disorder during the five year period 1955-1960, reports the following clinical/diagnostic-specific data relating to major field of study (which approximates the academic variable of faculty employed in the UCT-SHS study):

(i) Comparison of major field of study with primary psychiatric diagnosis (viz. psychotic disorder, neurotic disorder, personality (character) disorder and transient situational personality disorder) revealed that the dropouts with a diagnosis of psychoses were overrepresented in social sciences, literature, history, government and economics. They were underrepresented in mathematics and the physical sciences. Dropouts with a psychiatric diagnosis of neurotic disorder were overrepresented in mathematics, the humanities and the physical sciences.

(ii) Comparison of major field of study with secondary psychiatric diagnosis (including various personality disorders and depressive reactions) revealed that the schizophrenic group was overrepresented in history, government, economics, social sciences and literature. The depressive reaction group was overrepresented in mathematics and the physical sciences, the schizoid personality in mathematics and the sexual deviants in literature.

3.3.4.2 Level of study

This variable is the fourth most commonly reported one in the literature reviewing developed (first world) countries (10 of the 61 samples reported in 43 articles). The most useful indicator, for comparative purposes, to assess the level of study-specific profile of mental health service attendees is the undergraduate to postgraduate student (UG:PG) ratio. Therefore, this discussion will confine itself to addressing the undergraduate to postgraduate ratios recorded in Table 3.13. On the other hand, the level of study-specific profile of mental health service utilisation according to usage/utilisation rates per 1 000 students and utilisation ratios (where available) is assessed by the individual undergraduate and postgraduate-specific figures recorded in Table 3.13.

Table 3.13 Number of attendees, usage/utilisation rate per 1 000 students and number of consultations per patient according to level of study of students attending college/university mental health facilities.

Reference	Location	N	Details of Sample	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
(a) Developed (first world) countries						
Alston (1974)	New York University, USA	34	Minority (mainly Black and Hispanic) student attendees from 09/69 to 06/70	UG: 28 (82,4%) PG: 4 (11,8%) NDP: 2 (5,9%) UG:PG = 7,00:1	N/S	N/S
Boor (1975)	Fort Hays Kansas State College, USA	84[1]	Student attendees from 09/70 to 01/74	UG: 80 (95,2%) PG: 4 (4,8%) UG:PG = 20,00:1	N/S	N/S
Braaten and Darling (1961)	Cornell University, USA	639	Student attendees from 07/59 to 06/60	UG: 486 (76,1%) PG: 153 (23,9%) UG:PG = 3,17:1	N/S	N/S
Davidson and Hutt (1964)	Oxford University, UK	500	Student attendees from 09/50 to 06/61	UG: 440 (88,0%) PG: 60 (12,0%) UG:PG = 7,33:1	N/S	N/S
Dunn et al. (1980)	College Mental Health Center, Boston, USA	814[2]	Student attendees from 09/75 to 06/77	UG: 617 (75,8%) PG: 144 (17,7%) NDP: 53 (6,5%) UG:PG = 4,28:1	N/S	N/S
Fox and Reifler (1967)	University of North Carolina at Chapel Hill, USA	2 075	Student attendees from 06/56 to 05/64	N/S	UG: N/S [-] PG: 26,0 [-]	N/S
Gibbs (1975)	Stanford University, USA	87	Black student attendees at Cowell Health Center from 09/69 to 06/72	UG: 63 (72,4%) PG: 24 (27,6%) UG:PG = 2,63:1	N/S	UG: 4,50 PG: 5,37 UG:PG = 0,84:1
		3 517	Non-Black student attendees at Cowell Health Center from 09/69 to 06/72	UG: 1 688 (48,0%) PG: 1 829 (52,0%) UG:PG = 0,92:1	N/S	UG: 3,60 PG: 5,04 UG:PG = 0,71:1
		3 604	Student attendees at Cowell Health Center from 06/69 to 06/72	UG: 1 751 (48,6%) PG: 1 853 (51,4%) UG:PG = 0,94:1	N/S	N/S
Maclay (1967)	Birmingham University, UK	146	Student attendees from 01/64 to 12/65	UG: 119 (81,5%) PG: 27 (18,5%) UG:PG = 4,41:1	N/S	N/S

Reference	Location	N	Details of Sample	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
Reifler et al. (1967)	University of North Carolina at Chapel Hill, USA	125 550	Student attendees from 06/56 to 05/57 Student attendees from 06/65 to 05/66	N/S N/S	UG: N/S [-] PG: 20,03 [-] UG: N/S [-] PG: 42,53 [-]	N/S N/S
Schwarz (1964)	University of British Columbia, Canada	206	Student attendees from 09/62 to 05/63	N/S	UG: 14,5 [0,96] PG: 25,5 [1,70] UG:PG = 0,57:1	N/S
Sharp and Marra (1971)	University of Wyoming, USA	594	Student attendees from 07/67 to 06/68	UG: 532 (89,6%) PG: 62 (10,4%) UG:PG = 8,58:1	N/S	N/S
Walters (1970)	University of Illinois, USA	4 547	Student attendees from 09/58 to 06/68	UG: 3 274 (72,0%) PG: 1 273 (28,0%) UG:PG = 2,57:1	UG: 16,9 [0,77] PG: 22,4 [1,03] UG:PG = 0,75:1	N/S
(b) Developing (third world) countries						
NO ENTRIES						
(c) Southern African countries						
NO ENTRIES						

Footnotes

1. The figures quoted above represent a randomly selected sample of 84 cases from the entire caseload (exact number of cases is not mentioned in the article) of the Psychological Service Center during the 3+ year study period.
2. The entire case load of the College Mental Health Center was 847 cases but the authors excluded 33 cases due to various clerical reasons to leave a sample of 814 cases for which nearly complete data were available.
3. Exact figures are not provided in the script as this information is represented by the authors in the form of a graph.

Abbreviations appearing in Table 3.13:
N/S = Result not specified.
UG = Undergraduate students.
PG = Postgraduate students.
NDP = Non Degree purposes.

(a) Patient-specific data

(i) Country and objective-specific outline

A: Developed (first world) countries

– Attendees (Objective 1)

For attendee (Objective 1)-specific data it is noteworthy that the five samples recording undergraduate to postgraduate student attendance ratios greater than 4,00:1 do not appear to involve students attending the mental health services of their respective colleges/universities during any particular decade as one spans the 1950s (Davidson and Hutt, 1964), three span the 1960s and two span the 1970s. Likewise, a similar pattern emerges for the five samples recording undergraduate to postgraduate student attendance ratios less than 4,00:1 as two span the 1950s, all five (to a varying degree) span the 1960s and three span the 1970s.

This situation, although in agreement with that previously documented for age, is in clear contrast to that recorded for gender and race/population group, respectively, where specific time trends related to changes in the gender and race-specific composition of the total student community are evident. Therefore, as previously mentioned, it would appear that these two variables (unlike age and level of study) are important demographic indicators of social change as reflected in this altering pattern of students attending college/university in developed countries.

In conclusion, there appear to be no specific factors, probably including the composition of the total student community, that affects the usage of these facilities by undergraduate or postgraduate students – although the higher ratio reported by Gibbs (1975) for Black students compared to White students suggests that Black undergraduate students are either affected by a greater number of problems requiring evaluation and/or therapeutic intervention at the Cowell Health Center than their White counterparts or (more likely) that there is a smaller proportion of Black postgraduate students than White postgraduate students in the total student community of Stanford University.

– Usage/utilisation rates (Objective 3)

For usage/utilisation rate (Objective 3)-specific data only two samples reported usage/utilisation rates for undergraduate students (Schwarz, 1964, and Walters, 1970). In both cases, undergraduates recorded usage/utilisation rates less than 20 attendees per 1 000 students. It is significant that only one of the five (20,0 per cent) samples in which the usage/utilisation rate for postgraduate students is reported, recorded a usage/utilisation rate barely greater than 40 attendees per 1 000 students. The remaining four (80,0 per cent) samples accounted for between 20 and 40 attendees per 1 000 students.

Where overall usage/utilisation rates together with level of study-specific usage/utilisation rates are recorded in the literature reviewed, it has been possible to insert additional utilisation ratios (Bridges-Webb et al., 1992) to the basic results obtained from the original article already documented in Table 3.13. These ratios are calculated by dividing the undergraduate and postgraduate student usage/utilisation rates by the overall usage/utilisation rate. They are displayed in square brackets adjacent to the documented usage/utilisation rates. Both samples (Schwarz, 1964; Walters, 1970) which included the requisite data to determine utilisation ratios demonstrate that postgraduate students recorded a considerably higher figure than their undergraduate student peers. Therefore, these results imply an overrepresentation of postgraduate student attendees in developed (first world) college/university mental health service presentations.

– Mean number of consultations (Objective 4)

For mean number of consultation (Objective 4)-specific data only Gibbs (1975) reports on the mean number of consultations for Black and non-Black student attendees, respectively. All four of these subgroups recorded less than six consultations per student.

[The commentary appearing in the second paragraph of section 3.3.2.1(a)(i) (Overall student attendees) outlining conditions likely to affect the majority of developed (first world) college/university mental health services should be considered when these level of study-specific findings are compared to those detailed for developing (third world) and Southern African countries.]

B: Developing (third world) countries

For neither attendee (Objective 1)-specific data, usage/utilisation rate (Objective 3)-specific data or mean number of consultation (Objective 4)-specific data does any sample report level of study-specific findings.

C: Southern African countries

For neither attendee (Objective 1)-specific data, usage/utilisation rate (Objective 3)-specific data or mean number of consultation (Objective 4)-specific data does any sample report level of study-specific findings.

(ii) Explanation

The studies quoted above suggest that postgraduate students are more inclined to attend the college/university mental health service than their undergraduate peers. However, Pinkerton (1994) at Duke University, in trying to account for the under-representation of postgraduate students seen at the mental health clinic, suggests the following causative factors: (i) unwillingness to seek help (due to fear of not living up to an expectation – shared by the students and others – of greater self-sufficiency); (ii) greater use of denial, which may be a concomitant of the predominance of men in the postgraduate student body, and (iii) accessibility factors. Once arrived at the service, however, postgraduates are more likely to present problems in need of long-term psychotherapy. On the other hand, Schwarz (1964) notes that postgraduate students are more inclined to seek psychiatric help for their difficulties than are freshmen/freshers.

However, unlike their postgraduate peers, undergraduate students consist of school leavers receiving appropriate prerequisite vocational or non/vocational training in order to graduate from the University as skilled professionals, scholars or performers within a 3 to 6 year period. The relative level of skills acquisition required is (on the whole) more profound than that demanded of the postgraduate who is mainly building upon and/or refining pre-existing abilities developed during his/her undergraduate years. This transition from novice to skilled professional, scholar or performer is a demanding process which can often lead to potentially serious adjustment problems, thereby predisposing these students (especially historically disadvantaged Black students who derive from cultural backgrounds that are, in the first place, totally foreign to the Eurocentric orientation of the University) to a host of adjustment disorders, inter alia, leading to an increased number of mental disorders presenting at the college/university mental health service for evaluation and/or therapeutic intervention. In addition, undergraduate courses, on the whole, present a

greater financial burden to students than postgraduate courses which tend to be shorter and/or less expensive on a yearly basis (especially degrees by dissertation only). This financial burden can be a daunting proposition for the average (middle-class) student and his/her family which is further accentuated in the historically disadvantaged (especially in the socio-economic sphere) student and his/her family. The often overwhelming concern about raising the vast financial resources required to pursue, continue and eventually complete a tertiary education might predispose these students to ongoing stress and anxiety disorders, inter alia, leading to an increased number of mental disorders presenting at the college/university mental health service for evaluation and/or therapeutic intervention.

(b) Clinical/diagnostic-specific data

None of the 10 developed (first world) country samples detailing level of study-specific findings reported in the literature record clinical/diagnostic-specific data.

3.3.4.3 Year of study

This variable is the second most commonly reported one in the literature reviewing developed (first world) countries (15 of the 61 samples reported in 43 articles). It is also documented in two of the 19 samples obtained from five Southern African universities. The most useful indicator, for comparative purposes, to assess the year of study-specific profile of mental health service attendees is the first year (freshman/fresher) students to non-first (02 to 06)/remaining year student (01:R) ratio. Therefore, this discussion will confine itself to addressing the first year (freshman/fresher) students to non-first (02 to 06)/remaining year ratios recorded in Table 3.14. In the case of developed (first world) countries, these first year (freshman/fresher) students to non-first (02 to 06)/remaining year attendance ratios are further stratified according to ratios in excess of 1,00:1, ratios between 0,40 and 1,00:1 and ratios less than 0,40:1. On the other hand, the year of study-specific profile of mental health service utilisation according to usage/utilisation rates per 1 000 students and utilisation ratios (where available) is assessed by the individual year of study (01 to 04 only) – specific figures recorded in Table 3.14.

Table 3.14 Number of attendees, usage/utilisation rate per 1 000 students and number of consultations per patient according to year of study of students attending college/university mental health facilities.

Reference	Location	N	Details of sample	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
(a) Developed (first world) countries						
Boor (1975)	Fort Hays Kansas State College, USA	80[1]	Undergraduate student attendees from 09/70 to 01/74	01: 17 (21,3%) 02: 15 (18,8%) 03: 24 (30,0%) 04: 24 (30,0%) 01:R = 0,27:1	N/S	N/S
Braaten and Darling (1961)	Cornell University, USA	486	Undergraduate student attendees from 09/59 to 06/60	01: 194 (39,9%) R: 292 (60,1%) 01:R = 0,66:1	N/S	N/S
Carmen et al. (1968)	Harvard University, USA	106	Undergraduate student athlete attendees from 09/57 to 06/62	01: 22 (20,8%) 02: 44 (41,5%) 03: 21 (19,8%) 04: 19 (17,9%) 01:R = 0,26:1	N/S	N/S
		N/S	Undergraduate student non-athlete attendees from 09/57 to 06/62	01: N/S (23,0%) 02: N/S (29,0%) 03: N/S (24,0%) 04: N/S (24,0%) 01:R = 0,30:1	N/S	N/S
Craig (1974)	Anonymous Arts College in Baltimore, USA	44	Undergraduate student attendees from 09/70 to 06/71	01: 14 (31,8%) 02: 8 (18,2%) 03: 17 (38,6%) 04: 5 (11,4%) 01:R = 0,47:1	01: 54,9[2] [1,27] 02: 31,4[2] [0,73] 03: 66,7[2] [1,55] 04: 19,6[2] [0,45]	N/S
Davidson and Hutt (1964)	Oxford University, UK	440	Undergraduate student attendees from 09/50 to 06/61	01: 151 (34,3%) 02: 122 (27,7%) 03: 134 (30,5%) 04: 33 (7,5%) 05: 33 (7,5%) 01:R = 0,52:1	N/S	N/S
Dunn et al. (1980)	College Mental Health Center, Boston, USA	617[3]	Undergraduate student attendees from 09/75 to 06/77	01: 175 (28,4%) 02: 142 (23,0%) 03: 149 (24,1%) 04: 151 (24,5%) 01:R = 0,40:1	N/S	N/S
		144[3]	Postgraduate student attendees from 09/75 to 06/77	01: 75 (52,1%) 02: 43 (29,9%) R: 26 (18,1%) 01:R = 1,09:1	N/S	N/S
Fox and Reifler (1967)	University of North Carolina at Chapel Hill, USA	2 075	Undergraduate student attendees from 06/56 to 05/64	N/S	01: 22,6 [-] 02: 22,3 [-] 03: 28,5 [-] 04: 28,6 [-]	N/S
Frank and Kirk (1976)	University of California, Berkeley, USA	720	Undergraduate student attendees at the Campus Counseling Center entering University in 1966[4]	01: 399 (55,4%) 02: 174 (24,2%) 03: 76 (10,6%) 04: 71 (9,9%) 01:R = 1,24:1	N/S	N/S
		349	Undergraduate student attendees at the Psychiatric Service of the SHS entering University in 1966[5]	01: 114 (32,7%) 02: 103 (29,5%) 03: 59 (16,9%) 04: 73 (20,9%) 01:R = 0,49:1	N/S	N/S
		934	Undergraduate student attendees at either the Campus Counseling Center or Psychiatric Service of	01: 469 (50,2%) 02: 237 (25,4%) 03: 112 (12,0%) 04: 116 (12,4%)	N/S	N/S

Reference	Location	N	Details of sample	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
			the SHS entering University in 1966	01:R = 1,01:1		
Gibbs (1975)	Stanford University, USA	63	Undergraduate Black student attendees at Cowell Health Center from 09/69 to 06/72	01: 24 (38,1%) 02: 20 (31,7%) 03: 7 (11,1%) 04: 12 (19,0%) 01:R = 0,62:1	N/S	N/S
		1 688	Undergraduate Non-Black student attendees at Cowell Health Center from 09/69 to 06/72	01: 338 (20,0%) 02: 422 (25,0%) 03: 422 (25,0%) 04: 506 (30,0%) 01:R = 0,25:1	N/S	N/S
		1 751	Undergraduate student attendees at Cowell Health Center from 09/69 to 06/72	01: 362 (20,7%) 02: 442 (25,2%) 03: 429 (24,5%) 04: 518 (29,6%) 01:R = 0,26:1	N/S	N/S
Reifler et al. (1967)	University of North Carolina at Chapel Hill, USA	N/S	Student attendees from 06/56 to 05/57	N/S	01: 14,0[6] [-] 02: 14,0[6] [-] 03: 22,0[6] [-] 04: 22,0[6] [-]	N/S
		N/S	Student attendees from 06/65 to 05/66	N/S	01: 42,5[6] [-] 02: 42,5[6] [-] 03: 48,0[6] [-] 04: 48,0[6] [-]	N/S
Schwarz (1964)	University of British Columbia, Canada	206	Undergraduate student attendees from 09/62 to 05/63	N/S	01: 9,7 [0,64] R: 16,7 [1,11] 01:R = 0,58:1	N/S
Sharp and Marra (1971)	University of Wyoming, USA	532	Undergraduate student attendees from 07/67 to 06/68	01: 223 (37,5%) 02: 132 (22,2%) 03: 113 (19,0%) 04: 62 (10,4%) Missing: 2 01:4 = 0,72:1	N/S	N/S
U'ren et al. (1973)	US Military Academy at Westpoint, USA	119	Cadet attendees from 07/70 to 06/71	01: 74 (62,2%) 02: 24 (20,2%) 03: 12 (10,1%) 04: 9 (7,6%) 01:R = 1,64:1	N/S	N/S
Walters (1970)	University of Illinois, USA	3 274	Undergraduate student attendees from 09/58 to 06/68	01: 570 (17,4%)[7] R: 2 704 (82,6%) 01:R = 0,21:1	01: 13,0 [-] 02: 19,2 [-] 03: 20,1 [-] 04: 18,8 [-]	N/S
		1 273	Postgraduate student attendees from 09/58 to 06/68		01: 30,8 [-] R: 15,9 [-] 01:R = 1,94:1	

Reference	Location	N	Details of sample	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
(b) Developing (third world) countries						
NO ENTRIES						
(c) Southern African countries						
Naidoo (1997)	University of the Western Cape	1 004[8]	Student attendees from 01-12/95	01: 297 (35,3%) 02: 219 (26,0%) 03: 177 (21,0%) 04: 74 (8,8%) 05: 74 (8,8%) Missing: 163 01:R = 0,55:1	N/S	N/S
		722[9]	Student attendees from 01-12/96	01: 133 (21,6%) 02: 157 (25,5%) 03: 182 (29,6%) 04: 77 (12,5%) 05: 66 (10,7%) Missing: 107 01:R = 0,28:1	N/S	N/S

Footnotes

1. The figures quoted above represent a randomly selected sample of 84 cases from the entire caseload (exact number of cases is not mentioned in the article) of the Psychological Service Center during the 3+ year study period.

2. Usage/utilisation rates per 1 000 students have been calculated from an average yearly enrolment of 1 021,5 students (used by the author to calculate an overall usage/utilisation rate of 43,1 attendees per 1 000 students) being divided equally amongst freshman/fresher, sophomore, junior and senior undergraduate classes that are (according to the author) "approximately equal in size". The author states that the freshman/fresher-junior usage/utilisation peaks may reflect that the anonymous Arts College has a large influx of transfer students from two-year colleges into the junior year. Thus, in effect, there are two relatively large groups of incoming students in the freshman/fresher and junior years. Further analysis revealed that approximately one-third of the students seen were transfer students from other colleges.

3. The entire case load of the College Mental Health Center for 1975 to 1977 was 847 cases but the authors excluded 33 cases due to various clerical reasons to leave a sample of 814 cases for which nearly complete data were available.

4. The Campus Counseling Center focused on clinical vocational-educational counselling, i.e. assisting students to arrive at realistic and potentially satisfying educational and vocational objectives as well as facilitating their personal growth from a developmental frame of reference.

5. The Psychiatric Service had a therapy orientation and focused on assisting students with self-designated personal problems on a relatively short-term basis.

6. Exact figures are not provided in the script as this information is represented by the authors in the form of a graph.

7. The low rate of freshman/fresher (who comprised 24,3 per cent of the campus enrolment) consultations may be largely accounted for by all incoming freshmen/freshers attending the University of Illinois receiving a questionnaire from the Student Counseling Service, which is independent of the Health Service, with an invitation to come for an interview.

8. The entire caseload of the Centre for Student Counselling for 1995 was 1 280 cases but the correspondent excluded 276 cases due to the lack of client checklists (completed voluntarily) to leave a sample of 1 004 cases for which completed checklists were available.

9. The entire caseload of the Centre for Student Counselling for 1996 was 1 276 cases but the correspondent excluded 554 cases due to the lack of client checklists (completed voluntarily) to leave a sample of 722 cases for which completed checklists were available.

Abbreviations appearing in Table 3.14:

N/S = Result not specified.
R = Remaining (non-first (02 to 06) year) students.

(a) Patient-specific data

(i) Country and objective-specific outline

A: Developed (first world) countries

– Attendees (Objective 1)

For attendee (Objective 1)-specific data it is possibly noteworthy that the four samples recording first year (freshman/fresher) to non-first (02 to 06)/remaining year student ratios greater than 1,00:1 involve students attending the mental health services of their respective colleges/universities during the late 1960s or the 1970s. On the other hand, four of the six (66,7 per cent) samples reporting first year (freshman/fresher) to non-first (02 to 06)/remaining year ratios between 0,40:1 and 1,00:1 involved student attendees during the late 1950s and 1960s with the remaining studies spanning the 1970s. Furthermore, five of the seven (71,4 per cent) samples reporting first year (freshman/fresher) to non-first (02 to 06)/remaining year ratios less than 0,40:1 also involved student attendees during the late 1950s and 1960s with the remaining studies spanning the 1970s.

Therefore there appears to be the possibility of a time-specific trend as previously recorded for gender and race/population group, respectively, although this pattern is not nearly as profound. These two demographic variables are probably important indicators of social change as reflected in the pattern of students attending college/university in developed (first world) countries. However, the year of study-specific variable is possibly suggestive of a psychological change in the mindset of these students insofar as either first year (freshman/fresher) students appear more willing to attend the mental health service (more likely scenario) or non-first (02 to 06) year students appear less keen to seek psychotherapeutic assistance (less likely scenario). The former option would assume that new students affected by, inter alia, adjustment disorders to college/university are becoming either more aware of the presence and/or open to the helping role of the on-campus psychologist or psychiatrist.

In conclusion, a predominance of first year (freshman/fresher) students attending the mental health services of their respective colleges/universities is reported in four of the 15 (26,7 per cent) samples where attendance figures have been provided while non-first (02 to 06)/remaining year students predominate in the remaining 11 (73,3 per cent) samples. This trend could be time-specific insofar as the magnitude of non-first (02 to 06)/remaining year students predominance appeared to be greatest in the late 1950s and 1960s decreasing somewhat in the 1970s. This finding (like that of gender and race/population group outlined previously) could possibly be related to the composition of the total student community although other factors could be affecting usage of these facilities by first year (freshman/fresher) students.

– Usage/utilisation rates (Objective 3)

For usage/utilisation rate (Objective 3)-specific data it is noteworthy that only two of the seven (28,6 per cent) samples in which the usage/utilisation rate for first year (freshman/fresher) students is reported, recorded usage/utilisation rates greater than 40 attendees per 1 000 students. A further two (28,6 per cent) accounted for usage/utilisation rates between 20 and 40 attendees per 1 000 students while the remaining three (42,9 per cent) samples reported usage/utilisation rates less than 20 attendees per 1 000 students.

Likewise only one of the five (20,0 per cent) samples in which the usage/utilisation rate for second year (sophomore) students is reported, recorded usage/utilisation rates greater than 40 attendees per 1 000 students. A further two (40,0 per cent) accounted for usage/utilisation rates between 20 and 40 attendees per 1 000 students while the remaining two (40,0 per cent) samples reported usage/utilisation rates less than 20 attendees per 1 000 students.

However, two of the five (40,0 per cent) samples in which the usage/utilisation rate for third year (junior) students is reported, recorded usage/utilisation rates greater than 40 attendees per 1 000 students with one documenting in excess of 60 attendees per 1 000 students (Craig, 1974). Only one (20,0 per cent) accounted for usage/utilisation rates between 20 and 40 attendees per 1 000 students while the remaining two (40,0 per cent) also reported usage/utilisation rates less than 20 attendees per 1 000 students.

It can be observed that the five samples in which the usage/utilisation rate for fourth year (senior) students is reported, recorded an identical pattern to that previously outlined for second year (sophomore) students.

Where overall usage/utilisation rates together with year of study-specific usage/utilisation rates are recorded in the literature reviewed, it has been possible to insert additional utilisation ratios (Bridges-Webb et al., 1992) to the basic results obtained from the original article already documented in Table 3.14. These ratios are calculated by dividing the individual year of study student usage/utilisation rates by the overall usage/utilisation rate. They are displayed in square brackets adjacent to the documented usage/utilisation rates. Only one of the two (50,0 per cent) samples which included the requisite data to determine utilisation ratios (Craig, 1974) demonstrates that first year (freshman/fresher) students recorded a figure greater than 1,00. Therefore, these results do not imply either an over- or-underrepresentation of first year (freshman/fresher) student attendees in developed (first world) college/university mental health service presentations.

earn and save sufficient capital to pursue, continue and eventually complete a tertiary education), he/she will often be subject to the same increased social and familial responsibilities listed above in the corresponding subdivision under race/population group than their younger counterparts. These added responsibilities as well as the possible feeling of social isolation listed previously in the corresponding subdivision under age might predispose these students to a host of adjustment disorders and/or affective disorders, inter alia, leading to an increased number of mental disorders presenting at the college/university mental health service for evaluation and/or therapeutic intervention.

Existing student development theory and research suggests that social and personal developmental processes interact in a complex fashion to shape the rise and decline of student needs over time (Carney, Savitz and Weiskott, 1979). Perry (1970) and Chickering (1969) have hypothesised and Gallagher and Scheuring (1978) have reported that first year (freshman/fresher) students differ markedly from seniors (fourth year students) both in their specific concerns and in the way they deal with them. By way of explanation, Loeb and Magee (1992) report that students at the end of their first semester described themselves as less energetic, less friendly, less important, less reliable, less trusting and more average than they had described themselves when college/university had commenced. By late in the students' sophomore (second) year, ratings for all of these characteristics except trusting had moved back to approximately their original level. The pattern of changes in personal characteristics indicates the extent of the adjustment necessary when a person is beginning college or university. The authors note that college/university students are often moving from a high school where they achieved a good degree of success and received much approbation to an institution where their performance is marked by less academic success and fewer accolades, at least in the beginning. Perhaps, the authors note, it is necessary to fall back, to lose some bravado and to experience doubt and conflict before one can experience growth.

On the other hand, Astin (1977) reports that students developed more positive self-images over time including a sense of greater intellectual competence while Corbin-Sicoli (1984) found students becoming more intellectually curious, inquisitive and spirited. Similarly, Chickering (1974) reported changes from the beginning to the end of college/university in personality aspects such as greater autonomy, impulse expression and personal integration. Loeb and Magee (1992) claim that the common theme of these findings seems to be movement in the direction of increasingly vigorous, self-confident and independent searching. These, the authors claim, are certainly characteristics expected of and desired by a community of scholars.

Makwetu (1978) notes that the improved academic performance noted in University of Fort Hare students in the second year of study could be due to: (i) greater interest in the subjects chosen and pursued; (ii) experience in the language used as a medium of instruction – in this case English; (iii) experience in methods of studying; (iv) second year students not only being older than they were in the first year but also being more mature; (v) financial problems which usually create difficulties for many first year (freshman/fresher) students not being so pressing in the second year with the provision of loans and

bursaries, and (vi) second year students being more adjusted to social activities than first year (freshman/fresher) students. These observations are extremely relevant to historically disadvantaged Black students attending the University of Cape Town.

B: Usage/utilisation rates (Objective 3)

Studies that were characterised by a low rate of freshman/fresher consultations (Reifler, Liptzin and Fox, 1967; Walters, 1970) may be attributed to the availability of counselling personnel (advisors) who were either assigned or were readily accessible to freshmen/freshers. On the other hand, studies that were characterised by a high rate of freshman/fresher consultations with a general decrease in the rate of students seeking psychological assistance during each successive year of the four year college/university course (Baker and Nidorf, 1964) can be attributed, inter alia, to the fact that many students who are unable to meet the stressful demands of college/university life drop out or are forced to drop out of college/university. Indeed, Schwarz (1964) suggests that the first year (freshman/fresher) student (who appears reticent to attend the student mental health service) is more likely to drop out of college/university when he/she could perhaps have completed a productive course if he/she were given some assistance at the right time.

Gibbs (1975) notes that the decline in utilisation according to the class seniority among Black undergraduate students presents a contrast to non-Black undergraduate students. An explanation proposed by the author for this difference may be that Black undergraduate students are more anxious than their White peers during their first year due to academic deficiencies and socio-cultural differences, but that this anxiety and resulting emotional stress decline gradually in the next two years, then increase again slightly in the senior (fourth) year over decisions about graduate school (postgraduate studies), career or marriage. Thus, by the end of the sophomore (second) year many Black students seem to have resolved these issues and may, consequently, be less likely to seek therapy for other types of problems in their last two years. Moreover, as they become acclimated to the college/university environment, they may seek counselling from other campus sources that are more informal and less medically orientated. There are clear parallels between this situation outlined by Gibbs, above, and that pertaining to the University of Cape Town between the medically orientated UCT-SHS-MHS and the less formal, walk-in facility offered by the UCT-SADC.

C: Mean number of consultations (Objective 4)

Jenkins, Fuqua and Blum (1986) report that upper division clients (juniors/third year students and seniors/fourth year students) were more likely to be involved in longer treatment than freshmen/freshers (first year students) and sophomores (second year students).

(b) Clinical/diagnostic-specific data

None of the 17 (15 in developed (first world) countries and two in Southern African countries) samples detailing year of study-specific findings reported in the literature record clinical/diagnostic-specific data.

3.3.5 Residence (home address)

This variable is the seventh most commonly reported one in the literature reviewing developed (first world) countries (two of the 61 samples reported in 43 articles). The most useful indicator, for comparative purposes, to assess the residence (home address)-specific profile of mental health service attendees is the internationally (foreign) resident to locally and nationally resident student (I:L+N) ratio. Therefore, this discussion will confine itself to addressing the internationally (foreign) resident to locally and nationally resident ratios recorded in Table 3.15. On the other hand, the residence (home address)-specific profile of mental health service utilisation according to usage/utilisation rates per 1 000 students and utilisation ratios (where available) is assessed by the individual internationally (foreign) resident and locally and nationally resident-specific figures recorded in Table 3.15.

Table 3.15 Number of attendees, usage/utilisation rate per 1 000 students and number of consultations per patient according to residence (home address) of students attending college/university mental health facilities.

Reference	Location	N	Details of Sample	Details of attendees	Usage/utilisation rate per 1 000 students	Number of consultations per student
(a) Developed (first world) countries						
Braaten and Darling (1961)	Cornell University, USA	639	Student attendees from 07/59 to 06/60	L: N/S N: N/S I: 64 (10,0%)[1]	N/S	N/S
Maclay (1967)	Birmingham University, UK	119	Undergraduate student attendees from 01/64 to 12/65	L: N/S N: N/S I: 9 (7,6%)[2]	N/S	N/S
		27	Postgraduate student attendees from 01/64 to 12/65	L: N/S N: N/S I: 10 (37,0%)[2]	N/S	N/S
		146	Student attendees from 01/64 to 12/65	L: N/S N: N/S I: 19 (13,0%)[2]	L: 26,4 [-] N: 26,4 [-] I: 45,5 [-]	N/S
Walters (1970)	University of Illinois, USA	4 547	Student attendees from 09/58 to 06/68	N/S	L: 17,6 [0,81[N: 20,3 [0,93] I: 24,7 [1,13]	N/S
(b) Developing (third world) countries						
NO ENTRIES						
(c) Southern African countries						
NO ENTRIES						

Footnotes

1. The authors note that international (foreign) students were definitely overrepresented in their division. Their clinical impression is that many of the emotional problems affecting foreign students were situational in nature rather than difficulties in their personality structure.

2. The author notes that when these geographic-specific attendance figures were compared to the composition of the student body (students from foreign countries comprised 4,5 per cent of the undergraduate student population while students from foreign countries comprised 25,0 per cent of the postgraduate student population), a significant difference regarding the attendance of students from foreign countries at the psychiatrist at the Health Service is noted (χ^2 and p-values not provided).

Abbreviations appearing in Table 3.15:
N/S = Results not specified.
L = Locally resident students.
N = Nationally resident students.
I = Internationally (foreign) resident students.

3.3.5.1 Patient-specific data

(a) Country and objective-specific outline

(i) Developed (first world) countries

A: Attendees (Objective 1)

For attendee (Objective 1)-specific data only two samples reported residence (home address)-specific attendances. In both cases the internationally (foreign) resident to locally and nationally resident student attendance ratios were, as expected, less than 1,00:1. The high number of international (foreign) students amongst postgraduate Health Service attendees at Birmingham University (Maclay, 1967) is noteworthy. However, this situation might be related to the composition of the postgraduate student community which probably consists of a larger proportion of international (foreign) students compared to the undergraduate student community.

B: Usage/utilisation rates (Objective 3)

For usage/utilisation rate (Objective 3)-specific data only two samples reported usage/utilisation rates for local, national and international (foreign) students. It is significant that the only (16,7 per cent) subset of these students to record a usage/utilisation rate in excess of 40 attendees per 1 000 students were international (foreign) students (Maclay, 1967). Otherwise, four (66,7 per cent) of the remaining five subsets accounted for usage/utilisation rates between 20 and 40 attendees per 1 000 students with nationally resident students reporting a slightly higher figure than locally resident students in one sample (Walters, 1970).

Where overall usage/utilisation rates together with residence (home address)-specific usage/utilisation rates are recorded in the literature reviewed, it has been possible to insert additional utilisation ratios (Bridges-Webb et al., 1992) to the basic results obtained from the original article already documented in Table 3.15.

These ratios are calculated by dividing the locally resident, nationally resident and internationally (foreign) resident student usage/utilisation rates by the overall usage/utilisation rate. They are displayed in square brackets adjacent to the documented usage/utilisation rates. Only one sample (Walters, 1970) included the requisite data to determine utilisation ratios which demonstrate that internationally (foreign) resident students recorded a somewhat higher figure than their locally or nationally resident peers. Therefore, these results imply an overrepresentation of internationally (foreign) resident student attendees in developed (first world) college/university mental health service presentations.

C: Mean number of consultations (Objective 4)

For mean number of consultation (Objective 4)-specific data no sample from developed (first world) countries reported residence (home address)-specific mean number of consultations.

[The commentary appearing in the second paragraph of section 3.3.2.1(a)(i) (Overall student attendees) outlining conditions likely to affect the majority of developed (first world) college/university mental health services should be considered when these residence (home address)-specific findings are compared to those detailed for developing (third world) and Southern African countries.]

(ii) Developing (third world) countries

For neither attendee (Objective 1)-specific data, usage/utilisation rate (Objective 3)-specific data or mean number of consultation (Objective 4)-specific data does any sample report residence (home address)-specific findings.

(iii) Southern African countries

For neither attendee (Objective 1)-specific data, usage/utilisation rate (Objective 3)-specific data or mean number of consultation (Objective 4)-specific data does any sample report residence (home address)-specific findings.

(b) Explanation

Living away from home enhances feelings of insecurity and the student, in addition to other strains, may experience loneliness and doubt, rather than the delights of freedom which were anticipated (Wright-Short, 1967). The disappearance of rules which appeared irksome, but which were in fact supportive, and the dextrous domestic management achieved by average good parents may precipitate an emotional crisis. This state, according to the author, is more frequent in international (foreign) students who presented with some of the most severe reactions, varying from obsessive or depressive to frankly paranoid. On the other hand, Kysar (1964) reports that it is believed by some educators that one of the important factors in the

college/university learning experience is the separation from home and family. Rosecan, Fuqua and Blum (1992) suggest that first year (freshman/fresher) and second year students may be more vulnerable to the psychological aspects of separating from the home setting since leaving home and familial loved ones to attend college/university represents, for most late adolescents, the longest and most significant separation of their lives. This can, according to the authors, create and exacerbate vulnerabilities in students who are at risk for psychiatric problems.

The transitional social-support-stress-buffering hypothesis (Barrera et al., 1981; Leavy, 1983; McCormick et al., 1987; Sandler and Barrera, 1984) states that transition to a new environment requires one to meet the demands of many previously unfamiliar people, tasks and situations (Sykes and Eden, 1985). How well individuals cope with such stresses is a function, not only of personal coping mechanisms, but also of the number and strength of the individual's support systems – individuals who experience significant life stress, but who have strong social support, are protected from developing symptomatology associated with stress (Gore, 1978; Hirsch, 1980; Sandler and Barrera, 1984). The international (foreign) student would be especially lacking in any such support structures. International students are generally reluctant to initiate a counselling relationship (Sue and Sue, 1977) and when they do obtain help, it is more often from a medical than a psychological service (Alexander et al., 1976). Smith (1989) notes that the goal for the international student is to adapt to the host culture without adopting it and abandoning the home culture since they are planning to return to their home culture. Therefore, the general outcome of counselling for these students should be an increase in interaction with the host society and a decrease in anxiety and depression caused by cultural differences.

Research on problems that international (foreign) students face describes a phenomenon known as "uprooting disorders" characterised by disorientation, nostalgic-depressive reactions, feelings of isolation and feelings of alienation (Taft, 1977, quoted by Essandoh, 1995). This author has discussed the variations in the difficulty of coping in an unfamiliar culture and has mentioned that the difficulty in adjustment is often magnified by the size of the gap between the familiar culture and the unfamiliar culture. This concept is extremely relevant for up-country students, especially those from a historically disadvantaged background, who are separated from their family and cultural support structures. The University, for these students, represents a totally foreign environment requiring massive and, at times, overwhelming psychological adjustment.

According to Adelegan and Parks (1985) international students are prone to psychological problems, including: (i) homesickness (Pruitt, 1978); (ii) separation from family and friends (Hossain, 1982); (iii) depression, irritability and tiredness (Pruitt, 1978) and (iv) alcohol consumption (Oshodin, 1982). They are also subject to food problems (Hossain, 1982) including the procurement of familiar foods and ingredients for preparation of traditional meals of the home country.

Furthermore, Adelegan and Parks (1985) assembled a list of potential problems experienced by international students. These problems were grouped into clusters based on similarity of content: (i) transportation problems – getting to campus, getting to shopping areas and getting around town; (ii) social problems – contact with local people, contact with members of the opposite sex, contact with people from the home country and contact with other students; (iii) food problems – adjusting to local foods and getting foods of their home country; (iv) loneliness problems – getting news from home, making new friends and overcoming loneliness, and (v) cultural problems – adjusting to local moral values, procuring the music of their home country and procuring the clothing of their home country. These authors report that international students were confronted with the problem of letting go of the familiar and adjusting to a new environment insofar as they wanted to continue to eat the foods, wear the clothing and hear the music of their home country. They also wanted to keep in close contact with family and friends and worried about making new friends and getting to know local people and adjusting to the local morals, climate and food. These problems deal with both separation and incorporation (Van Gennep, 1960) as the students looked back to the familiar world of their home countries and were worried about successfully adapting to their new environment.

Braaten and Darling (1961) gained the clinical impression that many of the emotional problems affecting international (foreign) students were situational in nature rather than difficulties in their personality structure. The authors note that international students have certain unique problems (in addition to those previously outlined by Adelegan and Parks) which make college/university life in America a rather stressful situation: (i) except for English-speaking foreign students most of them have a significant language handicap; (ii) they have to learn a new culture at the same time as they study, and (iii) there are often striking differences in the educational system in America (South Africa) compared with their own which imply rather intensive readjustments. Arnstein (1995) also mentions lack of familiar supports being problematic to these students.

From the local perspective, students whose home address is outside metropolitan Cape Town must often reside in either University-administered residences or private lodgings far from home during term time, causing them to be separated from most of their immediate family and friends,. In addition, the historically disadvantaged Black student is further alienated by being removed from his/her cultural roots which are totally foreign to the Eurocentric culture of the University. Therefore many of these students are, in this respect, de facto international (foreign) students attending a tertiary educational institution that is actually situated within their own country. This dichotomy between local traditional African culture and the Eurocentric culture of the University has been emphasised throughout the literature review. The support structures outlined above are essential in providing the disheartened, confused and indecisive student with the necessary encouragement and advice to inspire renewed academic efforts or find appropriate solutions to problems. The absence of such support structures would predispose these students to a host of adjustment

disorders and/or affective disorders and/or anxiety disorders, inter alia, leading to an increased number of mental disorders presenting at the UCT-SHS-MHS for evaluation and/or therapeutic intervention.

In addition, older students (many of whom are historically disadvantaged Black students), who are often subject to the increased social and familial responsibilities listed previously in the corresponding subdivision under race/population group, whose home address is outside metropolitan Cape Town, are also separated from most of their immediate family and dependants. These students are still, however, often required to intervene in family disputes (especially if they are considered to be the head of the family) and provide necessary support and assistance. The student may not always be able to satisfactorily resolve these problems, which are often complex and of a financial nature, from afar and may be forced to interrupt his/her studies and return home to provide the necessary direct familial support. The helplessness of attempting to help dependants from the University or having to miss lectures may predispose these students to anxiety disorders, inter alia, leading to an increased number of mental disorders presenting at the UCT-SHS-MHS for evaluation and/or therapeutic intervention.

Dadfar and Friedlander (1982) report that their results support the belief that ethnic barriers (such as differing language, values, relation to authority) render cross-cultural counselling especially difficult. The authors suggest that effective cross-cultural counselling requires gaining client trust by acknowledging the conflict over solving problems in a manner that may violate ethnic mores of privacy and independence. Furthermore, students inexperienced with psychological help perceive it as a non-trustworthy, inappropriate means for solving personal difficulties. (This topic has previously been addressed in considerably more detail in the section describing the student mental health service.) This is an extremely relevant concept for the UCT-SHS-MHS as the majority of its staff derive from a White, middle class background which is totally different to that of many of their African patients.

Since negative attitudes may be associated with less favourable process and outcome expectations (Cash et al., 1978) and more severe psychological distress (Calhoun and Selby, 1974) and since experience with mental health professionals may modify negative attitudes, Dadfar and Friedlander (1982) recommend that mental health services might do well to initiate educational outreach programmes designed specifically for international students.

3.3.5.2 Clinical/diagnostic-specific data

Neither of the two developed (first world) country samples detailing residential (home address)-specific findings reported in the literature record clinical/diagnostic-specific data.

3.3.6 Financial Assistance

This variable is not reported in either the literature reviewing developed (first world) countries (none of the 61 samples reported in 43 articles), developing (third world) countries (none of the six samples recorded in four articles) or Southern African countries (none of the 19 samples obtained from five universities). UCT-administered financial aid is awarded according to strict criteria that are directly linked to combined family income. Therefore, in the context of the UCT-SHS study, eligibility for UCT-administered financial aid has been employed as a means of indirectly assessing the socio-economic status of students attending the University.

3.3.6.1 Overview

Kysar (1964) notes that as a student from lower socio-economic levels was growing up, he/she shared the many fateful consequences of this status such as: (i) bad housing; (ii) strife ridden neighbourhoods; (iii) unwholesome peer group influences; (iv) poor schools; (v) possibly greater psychopathology in parents, and (vi) a host of other factors. These factors, according to the author, do not result in personality disorder in the student in all cases, but they do in the aggregate tend to result in a higher rate and more severe degree of disorders of personality. This scenario is particularly relevant to local historically disadvantaged Black students. On the other hand, Jones (1972) notes that although economic difficulties were common amongst students, it was exceptional for these to be the immediate cause of psychiatric illness. The student usually does something about his/her financial difficulties, viz. borrows money, obtains a job or lives at home, but he/she may subsequently present with the consequences of the new situation. This conflict situation may lead to their presenting with psychiatric symptoms, but their dilemma is not usually immediately apparent, since they present with academic difficulties.

However, Bourdieu and Passeron (1977) using the notion of "cultural capital" argue that the family inculcates within the child a system of dispositions or "habitus" which will facilitate the ability to behave in "class appropriate" ways. The habitus of the working class (which represents the socio-economic background of the vast majority of Black students attending the University of Cape Town) is not in accordance with the knowledge, attitudes and behaviour required by the education system whereas the kinds of knowledge, attitudes and behaviours of the "upper" classes (which represent the socio-economic background of the majority of White students) are the same as those increasingly required the higher one goes in the educational system.

Hedegard and Brown (1969), in comparing White freshmen to Black freshmen students attending the University of Michigan's liberal arts college as part of a programme specially designed "to provide disadvantaged minority group students with the opportunity to pursue higher education", note that there were marked differences between these cohorts on various indices of socio-economic level. Their data

suggest that, at the University of Michigan, White students are drawn increasingly from upper-middle-class families. When differences in family size are taken into consideration, per capita income of families of Black students was probably less than one-half that of White students. Striking differences between Black and White families also appear in parents' education and occupation. About 70 per cent of the fathers of Black students were engaged in unskilled or semi-skilled occupations compared with only seven per cent of the fathers of White students. A similar difference existed when occupation levels of mothers who worked were examined with Black students' mothers being more likely to be employed than mothers of White students. There is no reason to assume that the race-specific socio-economic profile pertaining to South African universities, in general, and the University of Cape Town, in particular, is any different to that outlined for the University of Michigan. If anything, the legacy of apartheid and socio-economic disempowerment would have further disadvantaged the local Black community which comprises the majority group in this country. Therefore, in addition to making academic adjustments, historically disadvantaged Black students are required to become part of a complex social environment shaped in large part by various groups of upper-middle-class White students, faculty members and administrators.

3.3.6.2 Financial constraints

Given that 40 per cent of the metropolitan Black population, not including the (former) "homelands", earn below the poverty datum line (Dewar, 1991) and that about 25 to 40 per cent of the potentially active Black population is formally unemployed (Urban Foundation, 1990), it is likely that financial worries will constitute a major non-academic obstacle for most Black students (Selikow, 1994). Hawarden (1985 and 1992) notes that the lack of money is the most pressing problem experienced by Black students at the University of the Witwatersrand and that there is an increasing number of students who do not have the material means to equip themselves for their studies – a situation which perpetuates the cycle of disadvantage. (There is no reason to believe that the situation relating to students attending UCT is any different to this scenario.) Factors associated with lack of finances include: (i) not having money to buy books; (ii) financial worries about families, and (iii) having to work part-time (Selikow, 1994). Hawarden (1985) points out that many students are unable to pay their fees and that this may represent a source of constant tension and stress. Likewise, Selikow (1994) states that financial insecurity adversely affects academic performance insofar as these students may be uncertain whether they will even be able to afford to attend University the following year.

3.3.6.3 Bursaries/financial assistance

Selikow (1994) observes that having a bursary does not, in itself, preclude financial difficulty. Hawarden (1992) notes that some students make contributions from their subsistence money to alleviate the family's need, thereby making it difficult, if not impossible, for them to meet their own requirements for text books, stationery and clothes. Furthermore, as Agar (1989) observes, bursaries do not cover all academic or

personal financial expenses and often bursary money only becomes available well into the first term, thereby causing students to experience anxiety in this regard. Most Black students interviewed by Selikow (1994) spoke of the fear of failure which could result in a loss of bursaries and exclusion from the University leading to high levels of stress.

Even if students had enough money to subsist, Selikow (1994) notes that many Black students were often anxious about their families who live in poor conditions. Thus anxieties and worries relating to students' family problems often prevents students from focusing on their academic studies and may even make academic studies seem insignificant in relation to the suffering and poverty which most Black families experience. Indeed, many students did not have the backing of their family in relation to studying at university as their parents felt that they should be working to help support the family. Thus studying may create feelings of guilt and tension.

Therefore, students who are receiving UCT-administered financial aid comprise the least advantaged sector of the University community as these grants are awarded according to strict criteria that are directly linked to combined family income. Often, however, this financial aid is not sufficient to cover University fees, so that these students (especially historically disadvantaged Black students who are often subject to the same increased social and familial responsibilities listed previously in the corresponding subdivision under race/population group) are also subject to the overwhelming concern about raising the vast financial resources required to pursue, continue and eventually complete a tertiary education listed previously in the corresponding subdivision under level of study which might predispose these students to ongoing stress and anxiety disorders, inter alia, leading to an increased number of mental disorders presenting at the UCT-SHS-MHS for evaluation and/or therapeutic intervention.

A potentially ameliorating factor is that the University has not only recognised but has also made a concerted effort to address these financial difficulties experienced by particular groups of students insofar as the 1997 Vice Chancellor's report (Ramphele, 1997) states that financial aid for needy undergraduate students continues to be a major priority.

3.3.6.4 Usage/utilisation of mental health services and duration of treatment

Scheff (1966) and Snyder and Kahne (1969) found in their studies that, as a group, students who attended the mental health service were more likely to come from the higher socio-economic levels. Van Schoor (1989) reports that, in addition, upper-class clients have different values and expectations of the average therapist in comparison to middle and lower class clients. Upper-class clients tend to: (i) demand instant attention; (ii) monopolise more therapist time than is their due, and (iii) expect more input from the therapist than would be the norm.

3.3.7 Summary

Friedman and Coons (1969) at Indiana University, describe the typical student attending the Psychiatric Division of the Student Health Center as a 21 year old male in the first semester of his junior (third) year, in the faculty of Arts and Sciences with a Protestant religious background. Braaten and Darling (1961) at Cornell University, more definitively describe the student with the highest vulnerability of attending the Mental Health Division as a female in her freshman/fresher (first) year in Arts and Sciences, Agriculture or Education faculties, with an academic average of 70 or below, a foreigner, with Jewish religion or no preference for religion. Alternatively the description of a student with the lowest vulnerability of attendance is a male, upperclassman (third or fourth year student), who is a fraternity member, in Engineering or Veterinary Medicine faculties, with an academic average of 71 or higher, US citizen, of Protestant, Catholic or other religion. Although some of the student characteristics (variables/determinants) outlined by Braaten and Darling are not directly relevant to the University of Cape Town (viz. UCT does not posses Agriculture or Veterinary Medicine faculties nor are there any designated student fraternities in existence), this composite description of risk/vulnerability profile is of great relevance to the UCT-SHS study as this research will produce its own risk/vulnerability profile for local students. (In addition, marital status, religious affiliation and academic average were not investigated in the UCT-SHS study.)

In addition, Hopper (1972) reports students who were more likely to be amongst those who made infrequent visits (defined as four consultations or less) to the mental health service were (i) the recipient of no previous psychotherapy, (ii) age 20 or younger and (iii) living at home with their parents while attending university – viz. these biographical characteristics are in line with those of the majority of university students. On the other hand, students who were more likely to be amongst those who made frequent visits (defined as five consultations or more) were (i) the recipient of some form of previous psychotherapy, (ii) age 21 or older and (iii) living away from their parents.

Chapter 4

METHODOLOGY

This chapter is divided into six sections. The first section outlines the study designs employed by the UCT-SHS study in order to meet each of its four objectives. The second section describes the student samples and the student community investigated in the study – patients, controls and the total UCT student community are defined and brief methodological issues (including the calculation of usage/utilisation rates) raised. The third section defines the selected demographic, academic, residential (home address), financial assistance and clinical (diagnostic) variables that are used to determine the characteristics of students (more) inclined to various psychological or psychiatric complaints presenting at the UCT-SHS-MHS for evaluation and/or therapeutic intervention. The fourth section documents the University-specific data sources that provided these demographic, academic, residential (home address), financial assistance and clinical (diagnostic) – specific details for the patients, controls and total UCT student community being investigated. A brief outline of some of the ethical issues involved in obtaining this data is also included. The fifth section enumerates the nine research hypotheses (and their corresponding null hypotheses) tested in the UCT-SHS study. The sixth section details in some depth the analytic strategy involved in meeting the objectives of this study. Various univariate, bivariate (including odds ratios) and multivariate (including logistic regression analysis) statistical techniques are described and linked to the UCT-SHS study.

4.1 OBJECTIVES AND STUDY DESIGN

Isaacs (1990) states that epidemiology can be divided into descriptive epidemiology and analytical epidemiology, though the exact distinction between these two branches is far from clear. Descriptive epidemiology is concerned with prevalence of disease and analytical epidemiology is interested in elucidating how diseases vary with environmental factors. Kleinbaum, Kupper and Morgenstern (1982) in fact see descriptive and analytical epidemiology as the different ends of a continuum. The four objectives listed in this section of the Methodology chapter are described according to which end of this continuum they occupy. Indeed, the UCT-SHS study employs different study designs in order to meet each of these four objectives.

4.1.1 Objective 1

To describe students presenting at the UCT-SHS-MHS in terms of selected demographic, academic, residential (home address), financial assistance and clinical (diagnostic) variables.

This design entails a descriptive study both for the patient-specific and clinical/diagnostic-specific data and an analytic study for the clinical/diagnostic-specific data.

The data obtained from this objective will enable the construction of a fairly detailed profile of the typical UCT-SMS-MHS attendee.

4.1.2 Objective 2

To compare students presenting at the UCT-SHS-MHS with students presenting at the UCT-SHS who do NOT present at the UCT-SHS-MHS (controls) in terms of selected demographic, academic, residential (home address) and financial assistance variables.

This design is a case-control study for the patient-specific data.

4.1.3 Objective 3

To compare students presenting at the UCT-SHS-MHS with all other students attending the University of Cape Town in terms of selected demographic, academic, residential (home address), financial assistance and, where appropriate, clinical (diagnostic) variables.

This design entails a cross-sectional analysis for the patient-specific data and, where appropriate, the clinical/diagnostic-specific data.

4.1.4 Objective 4

To examine the association between the number of consultations at the UCT-SHS-MHS and selected demographic, academic, residential (home address) and financial assistance variables.

This design entails both a descriptive and analytic study for the patient-specific data and the major diagnostic categories for overall student attendees.

4.2 STUDY GROUPS

This section of the Methodology chapter details the student study groups employed for capture of data for the UCT-SHS study. There are three different (and mutually exclusive) student study groups employed – each one representing the data required to fulfil different objectives of the UCT-SHS study. The smallest sized sample (fulfilling the requirements of Objective 1) comprises UCT-SHS-MHS attendees (patients) for

the study period 1 January 1991 to 31 December 1994 (N = 932). The mid-sized sample (partially fulfilling the requirements of Objective 2) comprises UCT-SHS attendees who do NOT attend the UCT-SHS-MHS (controls) for the study period 1 January 1991 to 31 December 1994 (N = 1 924). The largest sized sample (partially fulfilling the requirements of Objective 3) comprises the total UCT student community during the study period 1 January 1991 to 31 December 1994 (N = 23 158).

Isaacs (1990) states that whatever the objectives of the study may be, the importance of clear and unambiguous case definition in epidemiological studies cannot be underemphasised. Definitions must be sufficiently precise so that the investigator can be sure which features must be present and which must be absent for unambiguous identification of the case (Bannister, 1968). Furthermore, the study should conform to criteria as outlined by Fletcher and Oldham (1959) insofar as cases should be based on observable phenomena rather than theoretical constructs and good case identification is dependent upon the specification of some boundary (even though this may be artificial) so that "normals" may be clearly separated from "cases".

4.2.1 UCT-SHS-MHS Attendees

4.2.1.1 Criteria for selection

The subjects for this study comprise University of Cape Town students seen by psychologists, psychiatrists and medical officers for psychological or psychiatric complaints at the UCT-SHS-MHS (as defined by an appropriate diagnostic code appearing in the "Patients Stat Details Sheet" completed by all professional staff rendering clinical services at the UCT-SHS) to record patient details during the study period 1 January 1991 to 31 December 1994.

Medical officers were included because they are either the initial professional contact for students presenting at the UCT-SHS/MHS with mental disorders or are occasionally utilised to treat patients who require urgent medication in the absence of the sessional psychiatrist or urgent therapeutic intervention in the absence of a sessional psychologist.

The UCT-SHS study employs a clear and unambiguous case definition insofar as cases are defined as attendance at the UCT-SHS-MHS from 1 January 1991 to 31 December 1993. The element of precision entailed in this definition is due to the fact that UCT-SHS-MHS attendance is, in turn, defined as a consultation with a psychologist, a psychiatrist or a medical officer conducting a mental health-specific consultation (as defined by an appropriate diagnostic code appearing in the "Patients Stat Details Sheet"). The UCT-SHS study does conform to the criteria outlined above in section 4.2 by Fletcher and Oldham (1959) insofar as attendance at the UCT-SHS-MHS is an easily observable phenomenon rather than a theoretical construct and the presence of a clearly-defined boundary between patients (UCT-SHS-MHS

attendees) and a set of date-matched controls (students presenting at the UCT-SHS with purely physical complaints – who do NOT present at the UCT-SHS-MHS) effectively separates "normals" from "cases".

4.2.1.2 Methodology employed

Collection and collation of UCT-SHS-MHS consultations recorded as psychological or psychiatric diagnoses appearing on the "Patients Stat Details Sheets" completed by professional staff rendering clinical services at the UCT-SHS to record patient details was performed to record 3 417 consultations for the study period 1 January 1991 to 31 December 1993. Once duplicate (repeat) consultations were removed to provide a list of individual patients attending the UCT-SHS-MHS during the study period, a total of 932 attendees remained.

4.2.2 UCT-SHS ATTENDEES WHO DO NOT ATTEND THE UCT-SHS-MHS

4.2.2.1 Criteria for selection

The controls for this study comprise University of Cape Town students seen by medical officers at the UCT-SHS for physical (medical) complaints who do NOT present at the UCT-SHS-MHS for psychological or psychiatric complaints during the study period 1 January 1991 to 31 December 1993.

4.2.2.2 Methodology employed

Compilation of date-matched (viz. seen on the same day) controls (unmatched by other variables under investigation such as race, sex, age, etc.) for UCT-SHS-MHS attendees was performed by manual cross-tabulation of psychologist and psychiatrist "Patients Stat Details Sheets" with corresponding medical officer "Patients Stat Details Sheets". (UCT-SHS-MHS attendees do include medical officer consultations for purely psychological or psychiatric complaints which will also be cross-matched by purely physical medical officer consultations.) Patients and controls are further matched, where possible, according to order of presentation on these corresponding lists (viz. seen at a similar time of day at the UCT-SHS). Relevant demographic, academic, residential (home address) and financial assistance data is subsequently obtained for patients and their date-matched controls from the University of Cape Town Central Admissions Office computerised records. Invalid controls – those UCT-SHS attendees who were also UCT-SHS-MHS patients during the study period (N=317) – were removed from the original sample of 2 241 to constitute the adjusted figure of 1924 controls.

4.2.3 Total University of Cape Town Student Community

4.2.3.1 Criteria for selection

The population base for this study comprises students whose details have been recorded by the UCT Central Admissions Office as proof of registration at the University of Cape Town during the study period 1 January 1991 to 31 December 1993.

4.2.3.2 Methodology Employed

UCT Central Admissions Office records were employed to obtain details of total student registrations for the study period. However, as separate yearly records are maintained by the University, they contain a high proportion of duplicate registration details for individual students who were registered for successive years at the University of Cape Town. Consequently, a computer was utilised to remove these duplicate details (of total UCT registrations) to provide a modified list of individual students registered during 1991, 1992 and 1993 – thereby reducing an initial total of 43 881 registrations to 23 158 students (viz. a duplication factor of 89,5%). This modified total of 23 158 students attending the University of Cape Town during the 3 year study period will enable the calculation of more appropriate UCT-SHS-MHS utilisation rates to partially fulfil the requirements of Objective 3.

4.2.4 Linkage between study groups and study design

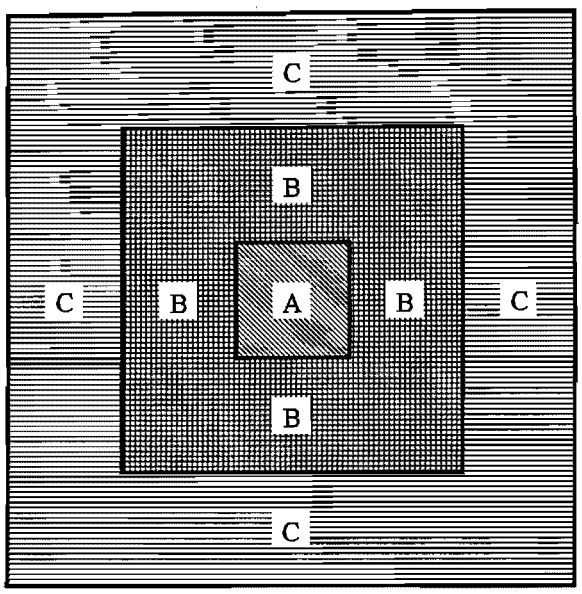
The UCT-SHS-MHS and its attendees presenting with psychological or psychiatric complaints is the primary focus of all four objectives of the UCT-SHS study. It is organisationally and operationally a subdivision of the UCT-SHS being housed in the same building at PROTEM campus and under the leadership of the Director of the UCT-SHS. The UCT-SHS is the source of the date matched medical controls who do NOT attend the UCT-SHS-MHS during the study period employed in Objective 2 of the UCT-SHS study. It is, in turn, a subdivision of the UCT-SDSD (Student Development and Services Department) which is responsible for promoting the welfare of the total UCT student community. The total UCT student community is the source of a further set of controls who do not attend the UCT-SHS-MHS during the study period employed in Objective 3 of the UCT-SHS-MHS study.

However, UCT-SHS-MHS attendees are not all referrals from UCT-SHS-based medical officers to resident psychologists and psychiatrist as some students directly approach the receptionist to make their own appointments, some are referred for assessment and/or therapeutic intervention by resident nursing staff and others are referred from external health care professionals/facilities – such as Groote Schuur Hospital. Therefore, certain students from the wider UCT student community have direct access to the UCT-SHS-MHS without requiring initial assessment/intervention from the UCT-SHS medical division – only the

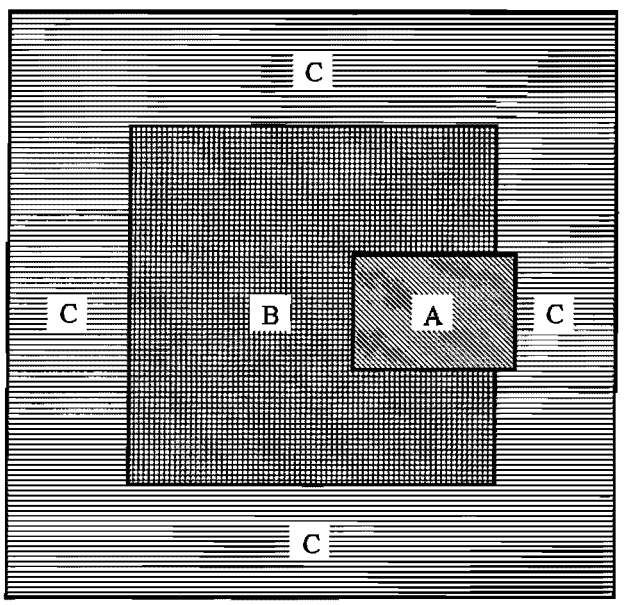
sessional psychiatrist requires a referral from a medical officer to initiate treatment. This factor would explain the difference between the structural/organisational model depicted in Figure 4.1(a) and the functional/ methodological model outlined in Figure 4.1(b).

Figure 4.1 Relationship between different sectors of the University of Cape Town as outlined in the stated objectives of the UCT-SHS study.

(a) Structural/organisational model



(b) Functional/methodological model



KEY

A UCT-SHS-MHS – corresponds to Objectives 1, 2, 3 and 4.
B UCT-SHS medical division (excluding UCT-SHS-MHS) – corresponds to Objective 2.
C Total UCT student community (excluding UCT-SHS-MHS) – corresponds to Objective 3.

4.2.5 Pilot Study

This subsection outlines the main patient-related trends obtained from a pilot study conducted during late 1993 and early 1994 to assess race and/or gender-specific student attendance patterns at the UCT-SHS-MHS.

4.2.5.1 Rationale

The motivation for this pilot study was the clinical observation that historically disadvantaged Black students appeared to be more likely to present with certain mental disorders at the UCT-SHS-MHS than their generally historically advantaged non-Black peers.. This observation became clearly apparent to the candidate soon after the commencement of his clinical duties as a medical officer at the UCT-SHS during May 1993. It seemed that it would be an extremely useful exercise to conduct a brief study to not only either confirm or reject this widely held observation but also, if present, to further quantify the extent of this phenomenon. (Also refer to rationale section in Chapter 1 for further details concerning motivation for the definitive UCT-SHS study.)

4.2.5.2 Methodology

Race and gender-specific details concerning students attending the UCT-SHS-MHS for psychological or psychiatric complaints were assessed over the 6 month study period of 1 July to 31 December 1992 by employing the same psychologist and psychiatrist (but not relevant medical officer) "Patients Stat Details Sheets" that will be used in the definitive student mental disorders study. These sheets proved to be a complete and reliable data source with respect to the clinical data sought. This data was manually collated to determine the gender, race/population group and race/population group and gender combined-specific frequency and percentages of UCT-SHS-MHS attendees.

4.2.5.3 Results

Table 4.1 demonstrates that female students constituted over two-thirds of UCT-SHS-MHS patients. Race/population group-specific results indicate that White students were responsible for the greatest number of UCT-SHS-MHS attendees followed by African and Coloured students. In the case of combined race/population group and gender-specific results, White female students presented with the greatest frequency at the UCT-SHS-MHS followed by Coloured female students, White male students, African female students and African male students who were all responsible for greater than 10,0 per cent of attendees.

Table 4.1 Frequency and percentages of patients (N=292) stratified by gender, race/population group and race/population group and gender combined.

(a) Gender		
Gender	**n**	**%**
Males	91	31,2
Females	201	68,2
Total	292	100,0
(b) Race/population group		
Race/population group[1]	**n**	**%**
Africans	79	27,1
Coloureds	58	19,9
Whites	155	53,1
Total	292	100,0
(c) Race/population group and gender		
Race/population group[1] and gender	**n**	**%**
African males	35	12,0
African females	44	15,1
Coloured males	8	2,8
Coloured females	50	17,1
White males	48	16,4
White females	107	36,6
Total	292	100,0

[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.

If the combined race/population group and gender-specific results are further stratified according to the four major clinical diagnostic categories (affective disorder, adjustment disorder, V-codes and anxiety (neurotic) disorder), the following subsets of historically disadvantaged students were clearly overrepresented (see below) in the various samples:

(a) **Affective disorders:**

(i) Coloured females: 14 ex 65 students (or 21,5% of TOTAL attendees);

(ii) African females: 12 ex 65 students (or 18,5% of TOTAL attendees).

(b) **Adjustment disorders:**

(i) Coloured females: 14 ex 75 students (or 18,7% of TOTAL attendees);

(ii) African males: 9 ex 75 students (or 12,0% of TOTAL attendees).

(c) **V-codes:**

(i) African females: 20 ex 86 students (or 23,3% of TOTAL attendees);

(ii) Coloured females: 17 ex 86 students (or 19,8% of TOTAL attendees).

(d) **Anxiety (neurotic) disorders:**

(i) African females: 4 ex 29 students (or 13,8% of TOTAL attendees);

(ii) African males: 3 ex 29 students (or 10,3% of TOTAL attendees);

(iii) Coloured females: 3 ex 29 students (or 10,3% of TOTAL attendees).

4.2.5.4 Discussion

As African students represented 13,8 per cent and Coloured students comprised 17,0 per cent of the total UCT student community during 1992, it would appear from these pilot study results that Black (especially African) students coming from a historically disadvantaged background are, indeed, more likely to present with mental health disorders at the UCT-SHS-MHS. In addition, female students coming from any background would seem to be further inclined to seek evaluation and/or therapeutic intervention from the UCT-SHS-MHS.

The undertaking of a more definitive study was justified by the fact that the above clinical observation relating to the race/population group-specific attendance pattern at the UCT-SHS-MHS was confirmed by the results of this pilot study which covered a six month period. This definitive study would not only have a considerably extended focus beyond the demographic variables of gender and/or race/population group – although the legacy of apartheid on historically disadvantaged and educationally underprepared Black students attending a traditionally White university would always be an extremely important consideration in this field of student mental health research – but it would also seek to employ more sophisticated computerised statistical techniques to facilitate detailed analysis of data collected and collated for this purpose. The broad aim of such a definitive study would be to provide a more detailed characterisation of UCT-SHS-MHS attendees according to additional demographic, academic, residential (home address) and financial assistance variables to assess whether certain of these more widely defined student subsets are more likely to present with mental disorders at the UCT-SHS-MHS.

Therefore, although a comparatively small-scale undertaking, this pilot study has proved that the "Patients Stat Details Sheets" completed by professional staff rendering clinical services at the UCT-SHS to record patient data appear to be a reliable data source that can be employed to collect the names of UCT-SHS-MHS attendees (patients) in the definitive study.

4.2.5.5 Summary

The following algorithm provides a summary of the relationship between the three stages involved in the undertaking of the UCT-SHS study.

Clinical observation
↓
Pilot study
↓
Definitive study

4.3 VARIABLES

> *Epidemiology is the study of the distribution of the determinants of disease frequency in human populations.*
>
> (MacMahon and Pugh, 1970: p. 1)

and

> *Epidemiology is the study of the distribution of a disease or a physiological condition in human populations (in time and space) and of the factors which influence this distribution.*
>
> (Lilienfeld, 1978: p. 87, quoted in Lilienfeld and Lilienfeld, 1980: p. 4)

These two definitions of epidemiology emphasise a concern with the role of various risk factors/determinants in the causation of disease (represented in the UCT-SHS study as attendance at the UCT-SHS-MHS from 1991 to 1993).

The term "variable" has been employed to describe selected categories of demographic, academic, residential (home address), financial assistance and, where appropriate, clinical (diagnostic) data relating to patients and controls as well as the UCT student population involved in the UCT-SHS study. This term rather than "determinant" was used as the latter implies a direct causal relationship between exposure (the variable under investigation) and outcome (attendance at the UCT-SHS-MHS). Nevertheless, despite this important methodological principle, the variables included in this section of the Methodology chapter serve to fulfil the above definitions of an epidemiological study.

The subcategories of these selected demographic, academic, residential (home address), financial assistance and clinical (diagnostic) variables pertaining to this study are listed in this section (and the corresponding Results chapter sections) according to either a non-abridged format or an abridged format. Exceptions to this format are the demographic variable of gender which is designated as abridged (with no non-abridged format) as it only has two subcategories and the demographic variable of age together with the residential (home address) variable for which an additional highly abridged format is introduced.

The non-abridged format with its greater than two variable-specific subcategories will be omitted from some Objective 2 and 3 analyses (viz. for the demographic variable of age, the academic variables of level of study and year of study, the non-metropolitan Cape Town-specific addresses of the residential (home address) variable, and the financial assistance variable) where such detail is considered as unhelpful and surplus to requirements. This format will permit a broadly descriptive and (where appropriate) analytic approach to the objectives of the UCT-SHS study where the variable-specific subcategories will be arranged in order of either the number of attendees (Objective 1), the value of unadjusted odds ratios for patients versus controls (Objective 2) and patients versus the total student community (Objective 3) or the mean number and total

number of consultations (Objective 4). This format, therefore, serves to address the objectives (rather than the stated Research Hypotheses – see below) of the UCT-SHS study.

On the other hand, the abridged format with its two variable-specific subcategories permits hypothesis testing insofar as nine stated Research Hypotheses and their corresponding Null Hypotheses (refer to section 4.5) have been devised for each of the selected demographic, academic, residential (home address) and financial assistance variables. These Research Hypotheses have been devised from either clinical observation or (mainly) information highlighted in the literature review and will be tested for each of the objectives of the UCT-SHS study to ascertain whether circumstances relating to UCT-SHS-MHS attendees are compatible with details reported in the literature. This format, therefore, serves to either confirm or reject the Research Hypotheses (rather than specifically address the objectives) of the UCT-SHS study.

Hence, these two separate (but coexisting) formats fulfil different (but interlinked) functions in this investigation of psychological or psychiatric complaints presenting at the UCT-SHS-MHS for evaluation and/or therapeutic intervention. Variable subcategories that are overrepresented amongst student attendees for either Objectives 1, 2, 3 or 4 would constitute potential risk factors while correspondingly underrepresented subcategories would constitute potential support or resisting factors. These findings could form the basis of future interventive preventive programmes directed at students whose demographic, academic, residential (home address) or financial assistance details coincide with those of UCT-SHS-MHS attendees.

4.3.1 Demographic Variables

4.3.1.1 Gender

This variable represents one of the three "immutable factors" (together with race/population group and age) over which the student has no voluntary control.

(a) Non-abridged format

- N/A

(b) Abridged format

- Male students
- Female students

4.3.1.2 Race/population group (according to the now repealed Population Registration Act of 1951)

This variable represents another of the three "immutable factors" (together with gender and age) over which the student has no voluntary control. Due to the unique history of this country, this variable should be viewed as potentially the most important of the nine variables (excluding race/population group and gender combined) employed to characterise students attending the UCT-SHS-MHS for evaluation and/or therapeutic intervention.

(a) Non-abridged format

- African students
- Coloured students
- Indian students
- White students

(b) Abridged format

- Black (African, Coloured and Indian) students
- White students

4.3.1.3 Race/population group (according to the now repealed Population Registration Act of 1951) and gender

This composite variable combines two of the three "immutable factors" (together with age) over which the student has no voluntary control. This composite variable should be regarded as potentially the most important one appearing in the UCT-SHS study as it recognises two well-documented levels of discrimination affecting certain subsets of students presenting with psychological or psychiatric complaints at the UCT-SHS-MHS.

(a) Non-abridged format

- African male students
- African female students
- Coloured male students
- Coloured female students
- Indian male students
- Indian female students
- White male students
- White female students

(b) **Abridged format**

- Black (African, Coloured and Indian) male students
- White male students
- Black (African, Coloured and Indian) female students
- White female students

(c) **Cross race/population group and gender format**

- Black (African, Coloured and Indian) male students
- White female students

and

- Black (African, Coloured and Indian) female students
- White male students

4.3.1.4 Age

This variable represents the last of the three "immutable factors" (together with gender and race/population group) over which the student has no voluntary control.

(a) **Non-abridged format** (according to individual years)

- 15 year old students
- 16 year old students
- 17 year old students
- 18 year old students

.

.

.

- 40 year old students
- >40 year old students

(b) **Abridged format** (according to World Health Organisation designated categories)

- 15 to 19 year old students
- 20 to 24 year old students
- ≥25 year old students

(b) Abridged format

- Undergraduate students
- Postgraduate students
- Other

(The subcategory classified as Other for level of degree refers to part-time students registered for single courses for non-degree purposes (NDP) and visiting foreign students.)

4.3.2.3 Year of study

This variable represents the last of the three "mutable factors" (together with faculty and level of study) over which the student exercises a great deal of voluntary control. This classification may be somewhat obscure and even controversial, but if the student successfully applies himself/herself to the academic demands of the university, he/she should – again subject to external financial and social constraints – automatically progress from one academic year to the next.

(a) Non-abridged format

- First (01) year students
- Second (02) year students
- Third (03) year students
- Fourth (04) year students
- Fifth (05) year students
- Sixth (06) year students
- Other

(The subcategory classified as Other for year of study refers to part-time students registered for single courses for non-degree purposes (NDP) and visiting foreign students as well as Masters and Doctoral degrees by dissertation only.)

(b) Abridged format

- First (01) year students
- Post first (02 to 06) year students
- Other

(The subcategory classified as Other for year of study refers to part-time students registered for single courses for non-degree purposes (NDP) and visiting foreign students as well as Masters and Doctoral degrees by dissertation only.)

4.3.3 Residential Variables

4.3.3.1 Home Address

This variable represents another of the three "relatively immutable factors" (together with language and financial assistance) over which the student has only limited voluntary control. It would (and often does) require a significant effort for a student to leave his/her home, family and friends in order to attend a distant university situated in a foreign and, for them, often hostile environment.

4.3.3.2 Non-abridged format

Home address within South Africa (and Namibia) is assessed according to postal code designation. This data is refined from the full home address – town, suburb and street details – appearing on the UCT Central Admissions Office computerised records. In order to group the various postal codes into a suitable format for analysis, the individual codes are numerically grouped into 30 sections – 14 of these lie within the boundary of metropolitan Cape Town, while the remaining 16 (which are more diffuse) are distributed throughout the remainder of South Africa (and Namibia). Although the grouping of these postal codes is somewhat arbitrary, these groupings do approximate the magisterial district distribution both within and outside metropolitan Cape Town.

(a) **Within metropolitan Cape Town** (according to Postal Code Groupings - PCGs)

PCG 15: Maitland-Goodwood resident students
PCG 16: Parow-Blackheath resident students
PCG 18: Greater Rondebosch resident students
PCG 19: Langa resident students
PCG 20: Guguletu resident students
PCG 21: Nyanga East resident students
PCG 22: Greater Athlone resident students
PCG 23: Khayelitsha resident students
PCG 24: Mitchell's Plain resident students
PCG 25: Greater Wynberg resident students
PCG 26: Observatory-Woodstock resident students
PCG 27: Muizenberg-Ocean View resident students
PCG 28: City-Sea Point resident students

(Refer to Appendix IV for a geocoded map of metropolitan Cape Town illustrating the distribution of individual PCGs.)

(b) **Outside metropolitan Cape Town but within the Western Cape health Region (WCHR)** (according to Postal Code Groupings - PCGs)

PCG 7: George-Cape West Coast resident students

PCG 8: Robertson-Cape Mid Coast resident students

PCG 9: Ceres-Worcester-Ladismith resident students

PCG 10: Laignsburg-Beaufort West-De Aar resident students

PCG 11: Eerste Rivier-Grabouw-Bredasdorp resident students

PCG 12: Malmesbury-Citrusdal-Mamre resident students

PCG 13: Atlantis resident students

PCG 14: Hopefield-Vredenburg-Saldanha resident students

PCG 17: Stellenbosch-Paarl-Franschhoek resident students

(c) **Outside metropolitan Cape Town and outside the Western Cape Health Region (WCHR) but within South Africa** (according to Postal Code Groupings - PCGs)

PCG 1: Transvaal resident students

PCG 2: Natal resident students

PCG 3: Orange Free State resident students

PCG 5: East London-Ciskei-Tembu resident students

PCG 6: Port Elizabeth-Cape Midwest resident students

PCG 29: Lamberts Bay-Springbok-Alexander Bay resident students

PCG 30: Kimberley-Upington resident students

(d) **Outside South Africa (including African countries)**

Kenya resident students

Lesotho resident students

Mauritius resident students

Namibia (PCG 4) resident students

Swaziland resident students

Zambia resident students

Zimbabwe resident students

Non-African countries resident students

4.3.3.3 Abridged format

- Within metropolitan Cape Town resident students
- Outside metropolitan Cape Town but within the Western Cape Health Region (WCHR) resident students

- Outside metropolitan Cape Town and outside the Western Cape Health Region (WCHR) but within South Africa resident students
- Outside South Africa (including neighbouring countries) resident students

4.3.3.4 Highly abridged format

- Within metropolitan Cape Town resident students
- Outside metropolitan Cape Town resident students

4.3.4 Financial Assistance Variables

4.3.4.1 Financial assistance status and value

This variable represents the last of the three "relatively immutable factors" (together with language and residence (home address)) over which the student has only limited voluntary control. It would (and often does) require a significant effort for a student from, especially, a historically disadvantaged background to accumulate the requisite funding to pursue a tertiary education. Even if the student is the recipient of university-administered financial assistance, it is usually inadequate to cover the vast array of expenses associated with this process.

(a) **Non-abridged format** (according to value in Rands)

Financial assistance value is assessed according to the official figures provided by the UCT Undergraduate Financial Aid Office (UFAO). In order for students to qualify for UCT-administered financial assistance they (and their parents) have to meet strict income-related criteria. The figures quoted for this variable reflect the value of this financial assistance received by students at the time of their initial consultation.

- < R5 000 UCT-administered financial aid students
- R5 000 - R9 999 UCT-administered financial aid students
- R10 000 - R14 999 UCT-administered financial aid students
- R15 000 - R19 999 UCT-administered financial aid students
- ≥ R20 000 UCT-administered financial aid students
- Ineligible/DNA UCT-administered financial aid students

(DNA = Did not apply for financial aid – the vast majority of these students would be ineligible for financial assistance as the availability of financial aid to financially disadvantaged students – who would qualify for financial aid – is widely advertised both on (and off) campus.)

(b) Abridged format (according to status)

- Eligible for UCT-administered financial aid students
- Ineligible/DNA for UCT-administered financial aid students

(DNA = Did not apply for financial aid – the vast majority of these students would be ineligible for financial assistance as the availability of financial aid to financially disadvantaged students – who would qualify for financial aid – is widely advertised both on (and off) campus.)

4.3.5 Clinical Variables

This variable is somewhat different to the preceding ten (including race/population group and gender combined) outlined above which can all be classified as exposure-orientated variables as they relate to selected demographic, academic, residential (home address) and financial assistance factors characterising students who, generally, subsequently develop psychological or psychiatric complaints which present at the UCT-SHS-MHS for evaluation and/or therapeutic intervention. This clinical variable, on the other hand, is directly related to the outcome of attendance at the UCT-SHS-MHS as it is the diagnostic label conferred upon the student by the treating psychologist, psychiatrist or, occasionally, medical officer. This further characterisation of the student, consequently, occurs subsequent to the initial development and presentation of the mental disorder. This differentiation between the nine (or ten) exposure-orientated variables and the single (but multi-component) outcome-orientated variable allows for the latter to be integrated within the former (for gender and race/population group) in the Results chapter.

The various mental disorders manifesting in students presenting at the UCT-SHS-MHS have been catalogued into a system of diagnostic codes to be employed by psychologists and psychiatrists when completing the "Patients Stat Details Sheet". These diagnostic codes have been modified from the Diagnostic and Statistical Manual of Mental Disorders, Third Edition, Revised (DSM IIIR) which is a classification system for psychiatric disorders devised by the American Psychiatric Association (APA) (APA, 1987).

4.3.5.1. Major diagnostic categories and individual diagnoses

(a) Non-abridged format

(i) PA- : Affective disorders

- PAB: Bipolar affective disorder
- PAM: Major depressive disorder
- PAD: Dysthymia (reactive)

(ii) **PJ- : Adjustment disorders**

- PJD: Adjustment disorder with depressed mood
- PJM: Adjustment disorder with mixed emotional features
- PJA: Adjustment disorder with academic inhibition

(iii) **PV- : V-codes**

- PVR: Relationship problem
- PVF: Family problem
- PVB: Complicated bereavement
- PVP: Pre- and post-termination counselling (for unplanned/unwanted pregnancy)
- PVA: Academic problem

The individual V-codes (PVR, PVF, PVA, PVB and PVP) correspond to psychosocial variables which can be employed as an indirect measure (indicator) of psychosocial stressors affecting students presenting at the UCT-SHS-MHS. The major potential limitation affecting these psychosocial variables relates to the completeness of the data set which is dependent on UCT-SHS-MHS professional staff uniformly coding for V-codes when they are present in student attendees.

(iv) **PN- : Anxiety (neurotic) disorders**

- PNO: Obsessive-compulsive disorder
- PNP: Panic disorder
- PNT: Post-traumatic stress syndrome (disorder)
- PNG: Generalised anxiety disorder
- PNE: Examination anxiety
- PNH: Hysterical disorder

(v) **Other**

- PP: Psychosis
- PEA: Anorexia
- PEB: Bulimia
- PPD: Personality disorder
- PSA: Alcohol abuse
- PSD: Drug abuse
- PXS: Sexual dysfunction
- PG: Gender issues
- PF+PNF: Phobia/Phobic anxiety
- PET: Extra time assessment

- PO: Other
- UNK: Unknown diagnosis

There is no clinical indication for phobia (PF) to be treated as a separate psychological or psychiatric disorder to phobic anxiety disorder (PNF) – hence the amalgamation of these separately coded disorders into a single entity for the purpose of data analysis. This procedure is compatible with the DSM IIIR classification of phobic disorders.

(b) **Abridged format** (according to major diagnostic categories)

- PA- : Affective disorders
- PJ- : Adjustment disorders
- PN- : Anxiety disorders
- PV- : V-codes
- Other

4.4 DATA SOURCES

This section of the Methodology chapter details the data sources employed for the capture of data for students involved in the UCT-SHS study. Daily records of the registration numbers and clinical diagnoses, inter alia, of patients seen are initially recorded on the "Patients Stat Details Sheet" by the consulting psychologist/psychiatrist and, where appropriate, medical officer at the UCT-SHS-MHS. It is this clinical data, together with relevant official UCT Central Admissions Office and UCT-UFAO (Undergraduate Financial Aid Office) data in the form of selected demographic, academic, residential (home address) and financial assistance variables which will be employed for analysis. The section concludes with a brief outline of some of the ethical issues involved by detailing the committees and university authorities approached before any of these data sources could be employed to fulfil the aims and objectives of this study.

4.4.1 Demographic, Academic and Residential (Home Address) Data

Demographic, academic and residential (home address) data was obtained from the UCT Central Admissions Office (courtesy of the Student Admissions System – SAS – Committee) in the form of separate diskettes for 1991, 1992 and 1993 student registration data.

4.4.1.1 Data files for demographic, academic and residential (home address) information

The three separate annual data files containing demographic, academic and residential (home address) data for students registered at the University for 1991, 1992 and 1993 were combined into a single data set which was further manipulated by removing duplicate (repeat) registration for the same student during the study period.

4.4.1.2 Collation of UCT Central Admissions Office data with UCT-SHS data

UCT Central Admissions Office demographic, academic and residential data relating to UCT-SHS-MHS attendees (patients) and UCT-SHS attendees who do NOT present at the UCT-SHS-MHS (controls) was collated with relevant clinical (including diagnostic codes) and/or consultation data (where appropriate) recorded from UCT-SHS "Patients Stat Details Sheets" via computerised merging (employing the University mainframe computer) of these student records into a single data base.

4.4.2 Financial Assistance Data

UCT-administered bursary and scholarship data was obtained from the UCT-UFAO (courtesy of Mrs June Koopman) in the form of separate diskettes for 1991, 1992 and 1993 student data.

4.4.2.1 Data files for bursary information

The three separate annual data files containing financial assistance data for students registered at the University for 1991, 1992 and 1993 were combined into a single data set which was further manipulated by removing duplicate (repeat) entries for the same student during the study period.

4.4.2.2 Collation of UCT-UFAO data with UCT-SHS data

UCT-administered bursary and scholarship data relating to UCT-SHS-MHS attendees (patients) and UCT-SHS attendees who do NOT present at the UCT-SHS-MHS (controls) was collated with relevant clinical (including diagnostic codes) and/or consultation data (where appropriate) recorded from UCT-SHS "Patients Stat Details Sheets" via computerised merging (employing the University mainframe computer) of these student records into a single data base – along with UCT Central Admissions Office demographic, academic and residential (home address) data.

4.4.3 Clinical (Diagnostic) Data

The registration number, consultation date and clinical diagnosis, inter alia, of students seen by psychologists, psychiatrists and, where appropriate, medical officers at the UCT-SHS-MHS as well as medical officers at the UCT-SHS is initially recorded on the "Patients Stat Details Sheet" (refer to Appendix IIIa for copy).

4.4.3.1 Manual collation

Manual collation of UCT-SHS-MHS psychological or psychiatric consultations (including relevant medical officer consultations) together with relevant UCT-SHS medical (purely physical) consultations for controls recorded on "Patients Stat Details Sheets" was performed over a thirty six month period, viz. 1 January 1991 to 31 December 1993. This hand-written clinical data was subsequently transferred to diskette.

The data recorded on the "Patients Stat Details Sheet" is normally transferred by the clinic secretary on to the UCT-SHS Computerised Patient Record System. The methodological strategy of manual collation was adopted to prevent the possibility of clerical data capture errors during this data transfer process as well as the further possibility of clerical misinterpretation of erroneous coding details recorded by certain psychologists, psychiatrists and, where appropriate, medical officers on their "Patients Stat Details Sheets". A further major reason for adopting this labour intensive manual system of clinical data collection (as opposed to a computerised download) was because a far less reliable computerised patient record system was operating at the UCT-SHS prior to 1993. This system was not acceptably accurate due to numerous data capture errors (T. Stevens – personal communication).

4.4.3.2 Data files for student health records

Lists of UCT-SHS-MHS attendees together with supporting clinical data were collected in a data file while the date-matched controls (UCT-SHS attendees who do NOT present at the UCT-SHS-MHS) were listed in a separate data file. This material was further processed with the creation of an Index File for each data set.

4.4.4 Ethical Issues

The specific ethical issues outlined in this subsection relate mainly to issues of confidentiality required by relevant University authorities prior to the release of student records. There are, however, further principles upon which contemporary medical ethical practice is based that are relevant to the UCT-SHS study. These are commonly referred to as the "Georgetown Mantra" and consist of: (i) justice; (ii) autonomy; (iii) beneficence, and (iv) non-malevolence (Beauchamp and Walters, 1989). These issues will be separately addressed in section 6.1.3 of the Discussion chapter.

4.4.4.1 University Ethics Committee (Code of Ethics for Researchers Committee)

Any study undertaken within the University involving students (or staff) as subjects of any form of social research requires the consent and approval of the University Code of Ethics for Researchers Committee. This committee (alternatively referred to as a Committee for the Protection of Human Subjects in Social Research) must, inter alia, satisfy itself that: (i) the object of the inquiry is desirable; (ii) the inquiry is designed so as to promise attainment of that object; (iii) the facilities desired can be provided without prejudice to staff or students or the other responsibilities of the University, and (iv) there is no apparent legal objection to the nature or the method of research.

An outline of the research including the aim and objectives of the study, subjects involved in the study and details of the data required to meet the objectives of the study was forwarded to this committee and circulated to relevant authorities (including the Senate) via the Principal's Circular for consideration. Approval was subsequently granted following the absence of any queries or objections to this material.

4.4.4.2 Student Health Service

Permission was sought for access to UCT-SHS records relating to UCT-SHS-MHS consultations (patients) and UCT-SHS consultations (controls). The Director of the UCT-SHS (Dr W.P. Orr – until December 1994 and Dr K.J. Gough from January 1995), following an undertaking to maintain the confidentiality of patient data/records, granted permission to use these records.

4.4.4.3 Student Admissions Systems (SAS) Committee

In addition, permission was sought for access to student records housed in the Central Admissions Office. The Student Admissions Systems (SAS) Committee (Chairman: Dr P.A.T. Wild), following the receipt of an outline of the research (refer to section 4.4.4.1 above for relevant details), granted permission to use student registration data relating to the patients and controls of this study as well as the total student community.

4.5 HYPOTHESES

This section of the Methodology chapter presents the research hypotheses (and corresponding null hypotheses) tested in the UCT-SHS study together with a brief rationale for their formulation. The points included in the variable-specific rationales flow directly from the Literature Review – hence each set of hypotheses is cross-referenced to its corresponding sub-heading/subsection appearing in Chapter 3. These

statements, which document the central questions addressed by this thesis, will relate to the selected demographic, academic, residential (home address) and financial assistance variables employed.

Of particular note is how the immutable variable of race/population group relates to all these hypotheses tested in the UCT-SHS study (with the exception of that addressing the academic variable of faculty) insofar as historically disadvantaged Black students, because of their unique position in society due to the legacy of apartheid (including socio-economic deprivation and a general state of educational under-preparedness), are faced with (often unique) challenges and demands to university life. These challenges may include increased social and familial responsibilities and raising the vast financial resources required to pursue, continue and eventually complete a tertiary education which may predispose these students to an increased number of mental disorders presenting at the UCT-SHS-MHS for evaluation and/or therapeutic intervention. These issues which have previously been raised in the Literature Review and will again be introduced into the variable-specific rationales are extremely relevant and important factors to consider in the interpretation of results obtained in this research work.

4.5.1 Research/Null Hypotheses Ia and Ib (Gender-specific variable)

(i) Research hypothesis Ia

Female students are more likely to present with mental disorders at the UCT-SHS-MHS than males.

(ii) Null hypothesis Ia

Female students are NOT more likely to present with mental disorders at the UCT-SHS-MHS than males.

(iii) Research hypothesis Ib

Female students are likely to require more consultations for mental disorders at the UCT-SHS-MHS than males.

(iv) Null hypothesis Ib

Female students are NOT likely to require more consultations for mental disorders at the UCT-SHS-MHS than males.

These Research Hypotheses were formulated as female students, it would seem, according to section 3.3.2.1 of the Literature Review:

- Have a lower threshold for referral to mental health services.
- Are given more sanction to acknowledge emotional problems.
- Are subject to gender discrimination and stereotyping.
- Are subject to role conflict between the traditional female image in society and the emerging professional role of women.
- Receive less family support of their career choice.
- Are subject to increased familial responsibilities of caring for dependent children.

4.5.2 Research/Null Hypotheses IIa and IIb (Race/population group-specific variable)

(i) Research hypothesis IIa

Black students are more likely to present with mental disorders at the UCT-SHS-MHS than White students.

(ii) Null hypothesis IIa

Black students are NOT more likely to present with mental disorders at the UCT-SHS-MHS than White students.

(iii) Research hypothesis IIb

Black students are likely to require more consultations for mental disorders at the UCT-SHS-MHS than White students.

(iv) Null hypothesis IIb

Black students are NOT likely to require more consultations for mental disorders at the UCT-SHS-MHS than White students.

These Research Hypotheses were formulated as Black students, it would seem, according to section 3.3.2.2 of the Literature Review:

- Are historically disadvantaged.
- Are educationally underprepared.
- Represent a population at risk who are subject to intense adjustment problems on a strange new campus with a Eurocentric-orientated culture.

- Are subject to increased social and familial responsibilities:
  - younger siblings
  - dependent consorts
  - children

4.5.3 Research/Null Hypotheses IIIa and IIIb (Age-specific variable)

(i) Research hypothesis IIIa

Older students (whose age is greater than 25 years) are more likely to present with mental disorders at the UCT-SHS-MHS than their younger peers.

(ii) Null hypothesis IIIa

Older students (whose age is greater than 25 years) are NOT more likely to present with mental disorders at the UCT-SHS-MHS than their younger peers.

(iii) Research hypothesis IIIb

Older students (whose age is greater than 25 years) are likely to require more consultations for mental disorders at the UCT-SHS-MHS than their younger peers.

(iv) Null hypothesis IIIb

Older students (whose age is greater than 25 years) are NOT likely to require more consultations for mental disorders at the UCT-SHS-MHS than their younger peers.

These Research Hypotheses were formulated as students whose age is greater than 25 years, it would seem, according to section 3.3.2.4 of the Literature Review:

- Are often historically disadvantaged (therefore they are subject to the conditions outlined in Research Hypothesis II for Black students).
- Are subject to low social integration with possible social isolation and a resultant sense of alienation.

4.5.4 Research/Null Hypotheses IVa and IVb (Language-specific variable)

(i) Research hypothesis IVa

Non-English first language speaking students are more likely to present with mental disorders at the UCT-SHS-MHS than their English first language speaking peers.

(ii) Null hypothesis IVa

Non-English first language speaking students are NOT more likely to present with mental disorders at the UCT-SHS-MHS than their English first language speaking peers.

(iii) Research hypothesis IVb

Non-English first language speaking students are likely to require more consultations for mental disorders at the UCT-SHS-MHS than their English first language speaking peers.

(iv) Null hypothesis IVb

Non-English first language speaking students are NOT likely to require more consultations for mental disorders at the UCT-SHS-MHS than their English first language speaking peers.

These Research Hypotheses were formulated as non-English first language speaking students, it would seem, according to section 3.3.2.5 of the Literature Review:

- Are most often historically disadvantaged (therefore they are subject to the conditions outlined in Research Hypothesis II for Black students).
- Have to study in, what is to them, a foreign language causing increased academic-related stress.

4.5.5 Research/Null Hypotheses Va and Vb (Faculty-specific variable)

(i) Research hypothesis Va

Arts, Music and Social Science and Humanities faculty students are more likely to present with mental disorders at the UCT-SHS-MHS than their non-Arts, Music and Social Science and Humanities faculty peers.

(ii) Null hypothesis Va

Arts, Music and Social Science and Humanities faculty students are NOT more likely to present with mental disorders at the UCT-SHS-MHS than their non-Arts, Music and Social Science and Humanities faculty peers.

(iii) Research hypothesis Vb

Arts, Music and Social Science and Humanities faculty students are likely to require more consultations for mental disorders at the UCT-SHS-MHS than their non-Arts, Music and Social Science and Humanities faculty peers.

(iv) Null hypothesis Vb

Arts, Music and Social Science and Humanities faculty students are NOT likely to require more consultations for mental disorders at the UCT-SHS-MHS than their non-Arts, Music and Social Science and Humanities faculty peers.

These Research Hypotheses were formulated as Arts, Music and Social Science and Humanities faculty students, it would seem, according to section 3.3.3.1 of the Literature Review:

- Have a propensity toward relatively abstract and subjective ideation.
- Often undertake non-vocational courses.
- Possibly more easily recognise and more willingly react to various psychological or psychiatric complaints.

4.5.6 Research/Null Hypotheses VIa and VIb (Level of study-specific variable)

(i) Research hypothesis VIa

Undergraduate students are more likely to present with mental disorders at the UCT-SHS-MHS than their postgraduate peers.

(ii) Null hypothesis VIa

Undergraduate students are NOT more likely to present with mental disorders at the UCT-SHS-MHS than their postgraduate peers.

(iii) Research hypothesis VIb

Undergraduate students are likely to require more consultations for mental disorders at the UCT-SHS-MHS than their postgraduate peers.

(iv) Null hypothesis VIb

Undergraduate students are NOT likely to require more consultations for mental disorders at the UCT-SHS-MHS than their postgraduate peers.

These Research Hypotheses were formulated as undergraduate students, it would seem, according to section 3.3.3.2 of the Literature Review:

- Possibly display a greater willingness to seek help for emotional problems.
- Require a greater level of skills acquisition to advance from novice to skilled professional, scholar or performer.
- Are presented with a greater financial burden
- especially historically disadvantaged students who are subject to the conditions outlined in Research Hypothesis II for Black students.

4.5.7 Research/Null Hypotheses VIIa and VIIb (Year of study-specific variable)

(i) Research hypothesis VIIa

First year (freshman/fresher) students are more likely to present with mental disorders at the UCT-SHS-MHS than their non-first year (02 to 06) peers.

(ii) Null hypothesis VIIa

First year (freshman/fresher) students are NOT more likely to present with mental disorders at the UCT-SHS-MHS than their non-first year (02 to 06) peers.

(iii) Research hypothesis VIIb

First year (freshman/fresher) students are likely to require more consultations for mental disorders at the UCT-SHS-MHS than their non-first year (02 to 06) peers.

(iv) Null hypothesis VIIb

First year (freshman/fresher) students are NOT likely to require more consultations for mental disorders at the UCT-SHS-MHS than their non-first year (02 to 06) peers.

These Research Hypotheses were formulated as first year (freshman/fresher) students, it would seem, according to section 3.3.3.3 of the Literature Review:

- May be subject to the "freshman myth" or the "matriculation myth".
- Are liable to increased confusion and self-doubt due to
- new found social freedom
- increased academic responsibility
- less academic success and fewer accolades
- Are less experienced in methods of studying.

- Are less experienced in English as the medium of instruction used – if they are historically disadvantaged students who are subject to the conditions outlined in Research Hypothesis II for Black students.
- Are less adjusted to social activities

4.5.8 Research/Null Hypotheses VIIIa and VIIIb (Residence/home address-specific variable)

(i) Research hypothesis VIIIa

Students whose home address (as opposed to term address for out-of-town students) is outside metropolitan Cape Town are more likely to present with mental disorders at the UCT-SHS-MHS than their peers whose home address is within metropolitan Cape Town.

(ii) Null hypothesis VIIIa

Students whose home address (as opposed to term address for out-of-town students) is outside metropolitan Cape Town are NOT more likely to present with mental disorders at the UCT-SHS-MHS than their peers whose home address is within metropolitan Cape Town.

(iii) Research hypothesis VIIIb

Students whose home address (as opposed to term address for out-of-town students) is outside metropolitan Cape Town are likely to require more consultations for mental disorders at the UCT-SHS-MHS than their peers whose home address is within metropolitan Cape Town.

(iv) Null hypothesis VIIIb

Students whose home address (as opposed to term address for out-of-town students) is outside metropolitan Cape Town are NOT likely to require more consultations for mental disorders at the UCT-SHS-MHS than their peers whose home address is within metropolitan Cape Town.

These Research Hypotheses were formulated as students whose home address is outside metropolitan Cape Town, it would seem, according to section 3.3.4 of the Literature Review:

- May experience insecurity, loneliness and doubt.
- May experience feelings of isolation and feelings of alienation.
- Have substantially reduced support systems in the form of family and friends.
- May be subject to "uprooting disorders", especially if they are international (foreign) students.
- May have language difficulties if they are international (foreign) students or historically disadvantaged students who are subject to the conditions outlined in Research Hypothesis II for Black students.

4.5.9 Research/Null Hypotheses IXa and IXb (Financial assistance-specific variable)

(i) Research hypothesis IXa

Students who are receiving UCT-administered financial aid are more likely to present with mental disorders at the UCT-SHS-MHS than their peers who are either ineligible for or not receiving UCT-administered financial aid.

(ii) Null hypothesis IXa

Students who are receiving UCT-administered financial aid are NOT more likely to present with mental disorders at the UCT-SHS-MHS than their peers who are either ineligible for or not receiving UCT-administered financial aid.

(iii) Research hypothesis IXb

Students who are receiving UCT-administered financial aid are likely to require more consultations for mental disorders at the UCT-SHS-MHS than their peers who are either ineligible for or not receiving UCT-administered financial aid.

(iv) Null hypothesis IXb

Students who are receiving UCT-administered financial aid are NOT likely to require more consultations for mental disorders at the UCT-SHS-MHS than their peers who are either ineligible for or not receiving UCT-administered financial aid.

These Research Hypotheses were formulated as students who are receiving UCT-administered financial assistance, it would seem, according to section 3.3.5 of the Literature Review:

- Are generally subject to a "habitus" that is not in accordance with the knowledge, attitudes and behaviour required by the tertiary education system.
- Are required to become part of a complex social environment shaped in large part by various upper-middle class groups – especially historically disadvantaged students who are subject to the conditions outlined in Research Hypothesis II for Black students.
- Often do not have money for books.
- Often have financial worries about family.
- Often have to work part-time.
- May be unable to pay their fees.

- May not have the backing of their family in relation to studying at university.
- Are often subject to the fear of failure that could result in a loss of bursaries and exclusion from university.

4.6 DATA ANALYSIS

> *One goal of biostatisticians is to help physicians to learn the most and the best that they can from scientifically obtained data.*
>
> (Lehmann and Shortliffe, 1991: p. 371)

This statement reflects the principle behind the use of the statistics to be employed in the analysis of both patient-specific and clinical/diagnostic-specific data collected and collated in the UCT-SHS study.

This section of the Methodology chapter details the analytic strategy employed to fulfil the patient-specific data and, where appropriate, the clinical/diagnostic-specific data included in each of the objectives of the UCT-SHS study. The Statistical Analysis System (SAS) statistical software package (Stokes et al., 1995) was used for all the univariate and bivariate analyses while the Statistica software package (StatSoft, 1998) was employed for all the multivariate modelling.

4.6.1 Objective 1

Objective 1 of the study was to describe students presenting at the UCT-SHS-MHS in terms of selected demographic, academic, residential (home address), financial assistance and clinical (diagnostic) variables. The patient-specific data included in this objective was addressed by employing various univariate statistical techniques while the clinical/diagnostic-specific data was addressed by employing additional bivariate statistical techniques which are outlined below.

4.6.1.1 Univariate analysis

(a) Frequency counts and percentages

A frequency count is the most common quantitative expression in descriptive statistics. The tactic is constantly used to determine N, the total number of members in a group of data (N = 932 patients) and to indicate the constituent subgroups, n_1, n_2 and so on (the subcategories of the selected demographic, academic, residential (home address), financial assistance and clinical (diagnostic) variables) (Feinstein, 1985).

Frequency counts and percentages will be performed on the patient-specific data collected and collated according to selected demographic, academic, residential (home address) and financial assistance variable

subcategories (both abridged format and non-abridged format while the clinical/diagnostic-specific data employs the non-abridged format for only overall student attendees and the demographic variables of gender and race/population group) to characterise students receiving mental health services at the University of Cape Town. Differences between subcategories of the selected patient-specific variables will be noted although some reference to the total student population (in the form of odds ratios and usage/utilisation rates recorded in Objective 3) would be required to establish any possible relationship to mental disorders requiring evaluation and/or therapeutic intervention at the UCT-SHS-MHS.

4.6.1.2 Bivariate analysis

(a) (Relative) odds ratios and confidence intervals

The odds in favour of an outcome (UCT-SHS-MHS attendance in this study) are defined as the ratio of the expected number of occurrences of an outcome to the expected number of non-occurrences of the outcome, and the odds ratio is defined as the ratio of the odds of an outcome's occurrence given the presence of a predictor to the odds of the outcome's occurrence given the absence of the predictor (Kachigan, 1986). (In the UCT-SHS study, the term "predictor" is not really applicable since no assumption can be made about the direction of any causal relationships between the variables). The unadjusted odds ratio calculated from the data is an estimate of the true odds ratio that exists within the student population from which patients and controls were drawn. Consequently a 95% confidence interval is provided for each result, so that there is a probability of 0,95 that the interval includes the true odds ratio (Flisher and Chalton, 1995). An odds ratio is declared significant if the ratio and its upper and lower 95% confidence limits do not include the value of one. The use of confidence intervals in bivariate analyses, unlike p-values (see below), allows one to separate the contributions of effect size (in other words, the magnitude of the differences in the relevant variables) and sample size (Gardner and Altman, 1990; Vanderschmidt et al., 1993). The effect size is reflected in the location of the confidence interval and the sample size (inter alia) is reflected in the width of the confidence interval. In addition, the use of confidence intervals is consistent with current trends in medical statistics in that the emphasis has swung from hypothesis testing to estimation of population parameters (McGuigan, 1995).

(Relative) odds ratios (with 95% confidence intervals) calculated from two-by-two (2x2) tables, will be performed on clinical/diagnostic-specific data collected and collated according to selected demographic, academic, residential (home address) and financial assistance variable subcategories for UCT-SHS-MHS attendees (patients). This statistical technique would provide a measure of the level of association between the individual major diagnostic categories presenting in UCT-SHS-MHS attendees according to the individual selected variables.

(b) Chi-square tests and p-values

The standard chi-square test for association is a 2x2 table of study results which provides an appropriate test of the null hypothesis (H_o) of no association between the presence of a predictor (exposure) and outcome (Schlesselman, 1982). Furthermore, chi-square is a statistic whose known frequency distribution under the null hypothesis of no association enables one to calculate p-values. Since large values of χ^2 indicate a large deviation of observed from expected, the higher the χ^2, the less likely it is that the study sample represents a random sample from a target population in which no association exists between the presence of a predictor (exposure) and outcome. In other words, the higher the value of χ^2, the lower the p-value, and the greater the confidence in rejecting the null hypothesis (Kramer, 1988).

The p-value should be considered only a guide to interpretation as it is a summary measure of the consistency of the data with a null hypothesis. Small p-values only indicate that "chance" is an unlikely explanation, leaving unanswered the question of whether an apparent association represents one of cause and effect (Schlesselman, 1982). Furthermore, tests for statistical significance yield p-values that reflect both the size of the differences investigated and the size of the samples. Large p-values can result from small differences in the relevant variables, small sample sizes, or both; conversely, small p-values can result from large differences in the relevant variables, large sample sizes, or both (Vanderschmidt et al., 1993).

The p-values associated with null hypothesis significance testing are usually interpreted in terms of whether the differences are statistically "significant" or not (Vanderschmidt et al., 1993). The level of p to be used as a cut-off point is arbitrary, but it is frequently set at 0,05 ("significant"), 0,01 ("highly significant") or 0,001 ("very highly significant"). Thus, there is no way of differentiating a value that is slightly less than the significance level from one that is slightly more than it. This has the potential for similarities to be overlooked. The converse scenario could also occur, whereby differences are overlooked (Flisher, 1996).

Chi-square tests and p-values will also be performed on clinical/diagnostic-specific data collected and collated according to selected demographic, academic, residential (home address) and financial assistance variable subcategories for UCT-SHS-MHS attendees (patients). This statistical technique would provide a further measure of the level of association between the individual major diagnostic categories presenting in UCT-SHS-MHS attendees according to the individual selected variables.

4.6.2 Objective 2

Objective 2 of the study was to compare students presenting at the UCT-SHS-MHS with students presenting at the UCT-SHS who do NOT present at the UCT-SHS-MHS (controls) in terms of selected demographic, academic, residential (home address) and financial assistance variables. The patient-specific data included

in this objective was addressed by employing various univariate, bivariate and multivariate statistical techniques which are outlined below.

4.6.2.1 Univariate analysis

(a) Frequency counts and percentages

Refer to the corresponding subdivision of Objective 1 (section 4.6.1.1(a)) for further theoretical issues relating to frequency counts and percentages.

Frequency counts and percentages will be performed on the patient-specific data collected and collated for patients (refer to Objective 1) and controls stratified according to selected demographic, academic, residential (home address) and financial assistance variable subcategories (abridged format and selected non-abridged format) to characterise, respectively, students receiving mental health services and students receiving purely medical (physical) services at the UCT-SHS (MHS). Differences between patients and controls in respect of these variables will be noted while additional statistical measures of association (see below) would be required to establish any possible relationship to mental disorders requiring evaluation and/or therapeutic intervention at the UCT-SHS-MHS.

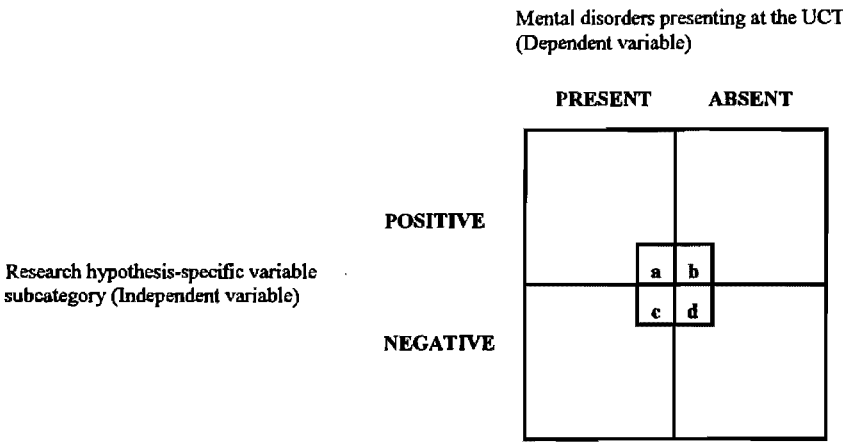
4.6.2.2 Bivariate analysis

(a) (Relative) odds ratios and confidence intervals

Refer to the corresponding subdivision of Objective 1 (section 4.6.1.2(a)) for further theoretical issues relating to (relative) odds ratios and confidence intervals.

(Relative) odds ratios (with 95% confidence intervals) calculated from two-by-two (2x2) tables, will be performed on patient-specific data collected and collated according to selected demographic, academic, residential (home address) and financial assistance variable subcategories (abridged format and selected non-abridged format) for the study group (students presenting at the UCT-SHS-MHS with psychological or psychiatric complaints) and corresponding date-matched controls (students presenting at the UCT-SHS with purely physical complaints who do NOT attend the UCT-SHS-MHS) (refer to Figure 4.2 for further details). This statistical technique would provide a measure of the level of association between UCT-SHS-MHS attendees and their data-matched controls according to the component subcategories of the individual selected variables.

Figure 4.2 Schematic diagram illustrating how unadjusted odds ratios (ORs) of UCT-SHS-MHS attendees (patients) versus UCT-SHS attendees who do NOT present at the UCT-SHS-MHS (controls) [and students registered at UCT (total student community)] are calculated.



$$\text{Unadjusted odds ratio (OR)} = \frac{\frac{a}{c}}{\frac{b}{d}} = \frac{ad}{cb}$$

(b) Chi-square tests and p-values

Refer to the corresponding subdivision of Objective 1 (section 4.6.1.2(b)) for further theoretical issues relating to chi-square tests and p-values.

Chi-square tests and p-values will also be performed on patient-specific data collected and collated according to selected demographic, academic, residential (home address) and financial assistance variable subcategories (abridged format and selected non-abridged format) for the study group (students presenting at the UCT-SHS-MHS with psychological or psychiatric complaints) and corresponding date-matched controls (students presenting at the UCT-SHS with purely physical complaints who do NOT attend the UCT-SHS-MHS). This statistical technique would provide a further measure of the level of association between UCT-SHS-MHS attendees and their date-matched controls according to the component subcategories of the individual selected variables as well as the individual selected variables per se.

(c) Expected frequencies

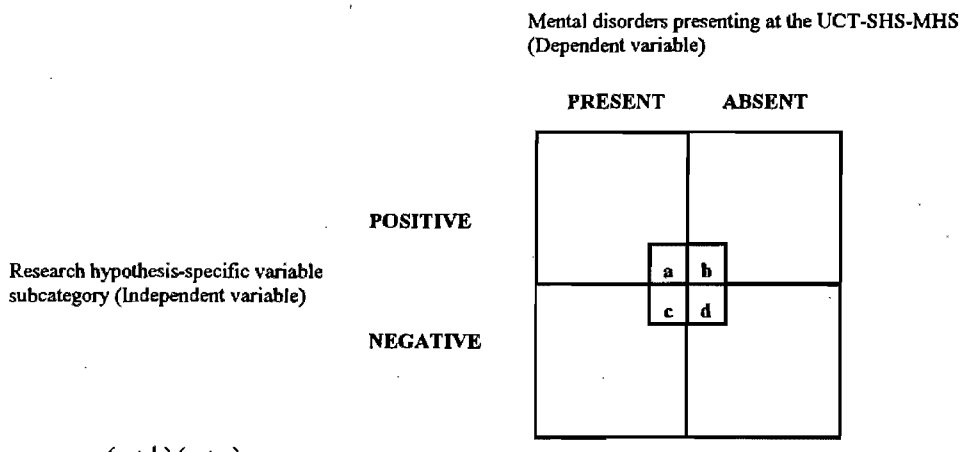
The expected frequencies for the various subcategories of students are equal to the product of corresponding marginal frequencies which are calculated from the row and column totals that appear in the margins (i.e. outside the cells) of the contingency (2x2) table divided by the total number of observations (Hirsch and Riegelman, 1991). Therefore, if it were hypothesised that the dependent (the presence of a mental disorder presenting at the UCT-SHS-MHS) and independent (being a specific abridged format subcategory of student) variable values are independent of each other, the frequencies of UCT-SHS-MHS attendees (patients) and UCT-SHS attendees who do NOT present at the UCT-SHS-MHS (controls) or students

registered at UCT (total student community) actually observed would equal those expected to be observed. Any difference between the observed and expected values would reject the hypothesis that the presence of a mental disorder presenting at the UCT-SHS-MHS and being the above abridged format subcategory of student are independent and confirm, by elimination, the alternative hypothesis that these variables are not independent (i.e. they are associated) in the population from which the sample was drawn.

Standardised residuals are Z scores calculated by subtracting the expected frequency from the observed frequency and dividing the outcome by the square root of the expected frequency which will enable the judgement of the post-hoc significance of the departure from independence in individual cells (Hays, 1991).

Expected frequencies and standardised residuals will also be determined on patient-specific data collected and collated according to selected demographic, academic, residential (home address) and financial assistance subcategories for the study group (students presenting at the UCT-SHS-MHS with psychological or psychiatric complaints) and corresponding data-matched controls (students presenting at the UCT-SHS-MHS with purely physical complaints who do NOT attend the UCT-SHS-MHS) (refer to Figure 4.3 for further details). This statistical technique would provide yet another measure of the association between UCT-SHS-MHS attendees and their date-matched controls according to the individual selected variables.

Figure 4.3 Schematic diagram illustrating how expected frequencies of UCT-SHS-MHS attendees (patients), UCT-SHS attendees who do NOT present at the UCT-SHS-MHS (controls) [and students registered at UCT (total student community)] are calculated under the assumption that the dependent and independent variables are independent of each other.



$$\text{Cell a} = \frac{(a+b).(a+c)}{a+b+c+d}$$

$$\text{Cell b} = \frac{(a+b).(b+d)}{a+b+c+d}$$

$$\text{Cell c} = \frac{(c+d).(a+c)}{a+b+c+d}$$

$$\text{Cell d} = \frac{(c+d).(b+d)}{a+b+c+d}$$

4.6.2.3 Multivariate analysis

Multivariate statistical techniques are used, for example, to describe the relationship between more than one independent variable and an outcome (attendance at the UCT-SHS-MHS) as well as permitting the statistical control of confounding which may occur in the assessment of the relationship between two variables by other variables. Multivariate analysis also allows for the statistical modelling of and examination of the interaction between two independent variables. Interaction refers to those situations where there is an effect brought about by the presence of both variables which is different to that produced on their own (Dirks, 1996). Multiple regression analysis indicates how much of the variation exhibited by a dependent variable can be accounted for by either (i) one variable or a subset of variables; (ii) many independent variables together, or (iii) uniquely by one variable, or a subset of variables, when other independent variables are held constant (Susser, 1973). The mathematical conceptualisation of the model contains provisions for the misleading predictive results that might occur if certain correlated variables were considered only one at a time, as in simple regression (Feinstein, 1985).

(a) Logistic regression analysis

Logistic regression is a powerful statistical tool for the estimation of odds ratios adjusted for confounding variables and for the systematic appraisal of effect modification whenever the period of observation is equal for all study subjects and the outcome of interest is a binary factor (Cox, 1970). Kelsey, Thompson and Evans (1986) note that the logistic model is often referred to as a multiplicative model because it incorporates the assumption that an individual variable in the model multiplies the odds of disease by an amount that is the same regardless of the values of the other variables. However, Schlesselman (1982) comments that there is no overriding biological rationale for general use of the logistic model insofar as its widespread application to the analysis of epidemiologic studies can only be supported on the grounds of mathematical convenience.

Logistic regression is useful in that it permits the usage of the odds ratio in order to assess the strength of association between two variables. This is obtained by deriving the antilogarithm (exponentiating) of the estimated logistic regression coefficient of the relation between the dependent variable and the explanatory or independent variable. An odds ratio is declared significant if the ratio is significantly different from a value of one. This will be determined using Student's t-test to test the natural logarithm of the odds ratio against a value of 0 (Fleiss, 1981).

The unadjusted odds ratios obtained for selected demographic, academic, residential (home address) and financial assistance variables for patients versus controls will be controlled for gender, race/population group and age – the three immutable demographic variables. As for the unadjusted odds ratios employed for bivariate analysis above, 95% confidence intervals will be calculated for each estimate (Fleiss, 1981).

A particular type of logistic regression is stepwise logistic regression analysis which describes the relationship between a categorical response (dependent) variable and a set of explanatory (independent) variables (Stokes et al., 1995). In stepwise logistic regression analysis terms in the model are added or subtracted in successive stages according to a criterion of statistical "significance" that is related to the extent to which the fit of the model is affected by the loss or gain of the next term (Rothman, 1986). Therefore, forward selection begins with a single variable and then continues to add predictor variables until none of the variables not in the model would add appreciably to the predictive power of the model while backward elimination starts with a model that includes all variables and then deletes those that did not contribute important information over and above what was contributed by the remaining variables (Kelsey, Thompson and Evans, 1986). A probability of 0,01 is often employed as entry criterion in order to minimise Type I statistical error (Kachigan, 1986). Odds ratios are obtained by exponentiating the estimated logistic regression coefficients. An odds ratio is declared significant if the ratio is significantly different from a value of one. This is determined by using Student's t-test to test the natural logarithm of the odds ratio against a value of 0 (Fleiss, 1981). The odds ratios (together with 95% confidence intervals) are then adjusted for all the other explanatory variables in the model.

However, Rothman (1986) notes that stepwise logistic regression, which is employed to reduce a large set of variables to a smaller set that can predict risk efficiently, is satisfactory for developing prediction models but undesirable when scientific inference is the analytic goal. Indeed, the author comments that, outside of a situation in which a multivariate model is used for prediction, there is no compelling reason to reduce the model to a small set of terms. A shortcoming of this model is that it uses statistical "significance" to assess the adequacy of a model rather than judging the need to control confounding for specific factors on the basis of the extent of confounding involved. A stepwise algorithm could, therefore, omit from a model several factors, none of which is individually "statistically significant", but which, when taken together, could account for a substantial amount of confounding.

Therefore, in view of these comments by Rothman and as the UCT-SHS study does not fulfil a predictive function (also refer to section 6.4.3.1), stepwise logistic regression will NOT be performed on patients versus controls (dependent variables) in respect of selected demographic (gender, race/population group, age and language), academic (faculty, level of study and year of study), residential (home address) and financial assistance variables in order to predict which of these independent variables are associated with mental disorders requiring evaluation and/or therapeutic intervention at the UCT-SHS-MHS.

4.6.3 Objective 3

Objective 3 of the study was to compare students presenting at the UCT-SHS-MHS with all other students attending the University of Cape Town in terms of selected demographic, academic, residential (home address), financial assistance and, where appropriate, clinical (diagnostic) variables. The patient-specific data (as well as, to a lesser extent, the clinical/diagnostic-specific data) included in this objective was addressed by employing various univariate, bivariate and multivariate statistical techniques which are outlined below.

4.6.3.1 Univariate analysis

(a) Frequency counts and percentages

Refer to the corresponding subdivision of Objective 1 (section 4.6.1.1(a)) for further theoretical issues relating to frequency counts and percentages.

Frequency counts and percentages will be performed on patient-specific data collected and collated for patients (refer to Objective 1) and the total student population stratified according to selected demographic, academic, residential (home address) and financial assistance variable subcategories (abridged format and selected non-abridged format) to characterise, respectively, students receiving mental health services and students registered at the University of Cape Town. Differences between patients and the total student community in respect of these variables will be noted while additional statistical measures of association (see below) would be required to establish any possible relationship to mental disorders requiring evaluation and/or therapeutic intervention at the UCT-SHS-MHS.

4.6.3.2 Bivariate analysis

(a) (Relative) odds ratios and confidence intervals

and

(b) Chi-square tests and p-values

Refer to the corresponding subdivisions of Objective 1 (section 4.6.1.2(a) and (b)) for further theoretical issues relating to (relative) odds ratios and confidence intervals as well as chi-square tests and p-values.

(c) Expected frequencies

Refer to the corresponding subdivision of Objective 2 (section 4.6.2.2(c)) for further theoretical issues relating to expected frequencies.

(Relative) odds ratios (with 95% confidence intervals) as well as chi-square tests/analyses with corresponding p-values and expected frequencies calculated from two-by-two (2x2) tables, will be performed on patient-specific data collected and collated according to selected demographic, academic, residential (home address) and financial assistance variable subcategories (abridged format and selected non-abridged format) for the study group (students presenting at the UCT-SHS-MHS with psychological and psychiatric complaints) and corresponding total student community members. These statistical techniques would provide measures of the level of association between UCT-SHS-MHS attendees and the total student population according to the component subcategories of the individual selected variables as well as (where appropriate) the individual selected variables per se.

(d) Usage/utilisation (prevalence) rates

Prevalence is defined as the total number of cases of a disease in existence at a certain time in a designated area (Dorland's Illustrated Medical Dictionary, 26th Edition, 1981) or as the number of cases of a disease existing in a population at risk at a given point in time which should be well circumscribed to indicate whether a study deals with point prevalence (i.e. on a specific date) or period prevalence (i.e. during a specific period) (Van Niekerk, 1979).

Formula employed to calculate period prevalence (and, thereby, usage/utilisation rates) in UCT-SHS study:

$$\frac{\text{Number of patients attending UCT - SHS - MHS (N = 905)}}{\text{Number of registered UCT students (N = 23158)}} \times 1\,000$$

(Actual number of UCT-SHS-MHS attendees is 932 but 27 which do not appear on official UCT Central Admissions Office registration data have been coded as missing responses.)
viz. Number of UCT-SHS-MHS attendees per 1 000 registered UCT students
(N = 39,1).

Sources:
Numerator: UCT-SHS-MHS "Patients Stat Details Sheet".
Denominator: UCT Central Admissions Office and UCT-UFAO (Undergraduate Financial Aid Office).

Prevalence rate differences between two samples are obtained simply by subtracting the prevalence rate for the unexposed group (or exposed group subcategory) from the corresponding rate for the exposed group (or the other exposed group subcategory/ies) (Kelsey, Thompson and Evans, 1986).

Period prevalence rates of UCT-SHS-MHS attendances for the study period 1 January 1991 to 31 December 1993 stratified according to component subcategories of selected demographic, academic, residential (home address), financial assistance and clinical (diagnostic) variables (both abridged and non-abridged format for the patient-specific data while the clinical (diagnostic) variable employs only the abridged format) will be

used to measure usage/utilisation rates by students registered at the University of Cape Town during the study period.

(e) Utilisation ratios

The utilisation ratio employed in the UCT-SHS study was initially employed by Bridges-Webb et al. (1992) in their survey of morbidity and treatment in general practice in Australia. It was subsequently employed locally by Volmink, Laubscher and Furman (1996) in their SASPREN (South African Sentinel Practitioner Research Network) primary care survey investigating who consults the family doctor. This utilisation ratio functioned in these studies to measure the relative use of private family practitioner services according to different patient demographic parameters (viz. gender and age by Bridges-Webb et al., 1992, and age/sex and age/race groups by Volmink, Laubscher and Furman, 1996). The proportion contributed by each group to family practice encounters was divided by the proportion of that group in the overall population of the catchment area. Therefore, a ratio of 1,0 means that a particular group is represented in GP encounters in the same proportion as it is in the population; less than 1,0 and more than 1,0 imply underrepresentation and overrepresentation, respectively.

Utilisation ratios will be calculated on both patient-specific and clinical/diagnostic-specific data collected and collated according to selected demographic, academic, residential (home address), financial assistance and clinical (diagnostic) variable subcategories (both abridged and non-abridged format for the patient-specific data while the clinical (diagnostic) variable employs only the abridged format) for students presenting at the UCT-SHS-MHS with psychological or psychiatric complaints. These ratios will be obtained by dividing the overall usage/utilisation rate (which corresponds to the usage/utilisation rate of the overall population of the catchment area – viz. the total UCT student community) by the individual usage/utilisation rates. Hence, a ratio less than 1,0 would mean that the selected variable subcategory under investigation is underrepresented within the total student community while a ratio greater than 1,0 would, in turn, imply that the selected variable subcategory under investigation is overrepresented within the total student community.

4.6.3.3 Multivariate analysis

(a) Logistic regression analysis

Refer to the corresponding subdivision of Objective 2 (section 4.6.2.3(a)) for further theoretical issues relating to logistic regression analysis.

The unadjusted odds ratios obtained for selected demographic, academic, residential (home address) and financial assistance variables for patients versus the total student community will be controlled for gender, race/population group and age – the three immutable demographic variables. As for the unadjusted odds

ratios employed for bivariate analysis, 95% confidence intervals will be calculated for each estimate (Fleiss, 1981).

Logistic regression will be performed on patients versus the total student community (dependent variables) in respect of selected demographic (gender, race/population group, age and language), academic (faculty, level of study and year of study), residential (home address) and financial assistance variables in order to determine which of these independent variables are associated with mental disorders requiring evaluation and/or therapeutic intervention at the UCT-SHS-MHS.

4.6.4 Objective 4

Objective 4 of the study was to examine the association between the number of consultations at the UCT-SHS-MHS and selected demographic, academic, residential (home address), financial assistance and clinical (diagnostic) variables. The patient-specific data (as well as the clinical/diagnostic-specific data for overall student attendees) included in this objective was addressed by employing various univariate and multivariate statistical techniques which are outlined below.

4.6.4.1 Univariate analysis

(a) Frequency counts and percentages

Refer to the corresponding subdivision of Objective I (section 4.6.1.1(a)) for further theoretical issues relating to frequency counts and percentages.

Frequency counts and percentages will be performed on the patient-specific data collected and collated for the total number of consultations at the UCT-SHS-MHS stratified according to selected demographic, academic, residential (home address), financial assistance and clinical (diagnostic) variable subcategories (abridged format and selected non-abridged format while the clinical/diagnostic-specific data is only collected and collated for overall student attendees according to the major diagnostic categories) to characterise the apportionment of therapist time at the UCT-SHS-MHS. Additional statistical measures of association (see below) would be required to establish any possible relationship between these selected variables and mental disorders requiring evaluation and/or therapeutic intervention at the UCT-SHS-MHS.

4.6.4.2 Bivariate/multivariate analysis

(a) Analysis of variance (ANOVA)

Howell (1996) notes that the analysis of variance (ANOVA) has long enjoyed the status of being the most used statistical technique in psychological research. The author attributes the popularity and usefulness of this technique to two sources: (i) the analysis of variance, like Student's t statistic (t-test), deals with differences between or among sample means but, unlike t it imposes no restriction on the number of means, and (ii) the analysis of variance also permits one to deal with two or more independent variables simultaneously, asking not only about the individual effects of each variable separately, but also about the interacting effects of two or more variables.

Korf (1993) quoted by Sekhute (1994) referring to the SAS (1989) computer results explained the ANOVA results as follows: (i) the overall analysis of variance table breaks down the Total Sum of Squares for the dependent variable into the portion attributed to the model and the portion attributed to error; (ii) the Mean Square term is the Sum of Squares divided by the degrees of freedom; (iii) the Mean Square for Error is an estimate of Q, the variance of the true errors; (iv) the F Value is the ratio produced by dividing the Mean Square for the Model by the Mean Square for Error. It tests how well the model as a whole (adjusted for the mean) accounts for the dependent variable's behaviour. An F test is a joint test to determine that all parameters except the intercept are zero; (v) a small significance probability, Pr>F, indicates that some linear function of the parameters is significantly different from zero; and (vi) R^2, measures how much variation in the dependent variable can be accounted for by the model. R, which can range from 0 to 1, is the ratio of the sum of squares for the model divided by the sum of squares for the corrected total. In general, the larger the value of R, the better the model's fit.

One way analyses of variance (ANOVAs) will be performed on the patient-specific data (as well as the clinical/diagnostic-specific data for overall student attendees) collected and collated according to selected demographic, academic, residential (home address) and financial assistance variable subcategories (selected non-abridged format in which unadjusted ORs are calculated for Objectives 2 and 3 – except PCGs within metropolitan Cape Town which display a wide fluctuation in students residing in individual PCGs) as well as the clinical (diagnostic) variable for overall student attendees for the study group (students presenting at the UCT-SHS-MHS with psychological or psychiatric complaints). This statistical technique would determine if there are any significant differences between the mean number of consultations per patient according to the component subcategories of the individual selected variables.

(b) Student's t statistic (t test)

This is a method for measuring the difference between the means of two samples. Any hypothesis about a difference of means can be tested using the t distribution, regardless of sample size, provided both samples

have normal distributions (Hays, 1988). However, the author notes that when the two samples do not have equal variances and/or are of different size, it may be necessary to use a correction in the value for degrees of freedom (df) employed so that the resultant df may not necessarily remain an integer. The t distribution – in fact there are many different t distributions – is symmetrical about 0 and is specified by the degrees of freedom employed (Ott, 1988). The formula for Student's t statistic (t test) is as follows:

$$t = \frac{(\overline{X}_1 - \overline{X}_2) - (\mu_1 - \mu_2)}{s_{\overline{x}_1 - \overline{x}_2}}$$

Unpaired t tests will be performed on patient-specific data collected and collated according to selected demographic, academic, residential (home address) and financial assistance variable subcategories (abridged or highly abridged format where ANOVAs are not performed for the corresponding non-abridged or abridged format – gender, level of study, year of study and financial assistance) for the study group (students presenting at the UCT-SHS-MHS with psychological or psychiatric complaints). This statistical technique, where appropriate, would determine if there are any significant differences between the mean number of consultations per patient according to the (hypothesis-specific) subcategories of the individual selected variables. The reason for this somewhat selective use of t tests is that this test would be an invalid (unnecessary) procedure if the preceding ANOVA performed for the corresponding non-abridged or abridged format of the race/population group, race/population group and gender combined, age, language, faculty or residential (home address) variables were to produce a result that was not statistically significant. Alternatively, a statistically significant ANOVA would lead to a further series of pairwise comparisons (see below) that would provide a more detailed set of results than the t test, thereby rendering this statistic redundant.

(c) Pairwise comparisons

(i) Tukey's W procedure/HSD (Honestly Significant Difference)

This is a method for testing the post hoc significance of pairwise comparisons amongst the sample means appearing in the preceding ANOVA. This method relies on a statistic known as the studentized range statistic (q) which is the difference between the largest and the smallest mean yielded by the samples employed in the preceding ANOVA divided by the square root of the Mean Square error also found in the preceding ANOVA:

$$t' = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{\frac{MS_{within}}{n}}} \qquad df = N\text{-}k; \quad k$$

The statistic q has a sampling distribution which depends upon the number of independent sample means appearing in the preceding ANOVA and the number of degrees of freedom associated with the Mean Square error. The HSD (Honestly Significant Difference) is calculated according to the statistic q multiplied by the

value of α employed (0,05) multiplied by the square root of the Mean Square error found in the preceding ANOVA divided by the harmonic mean of all the independent sample sizes. A finding is considered to be statistically significant beyond the 0,05 level if the absolute difference between any pair of means (pairwise comparison) equals or exceeds the HSD (Hays, 1988; Ott, 1988). Alternatively, confidence limits can be constructed for the resultant difference between means insofar as the comparison is considered to be significant at the 0,05 level and, therefore, identified as one possible contributor to the overall significance of the F Value in the preceding ANOVA when the confidence interval fails to cover zero (Hays, 1988). This multiple comparison procedure can be used to construct simultaneous confidence intervals for all pairs of means being compared (Ott, 1988).

Pairwise comparisons will be performed on the patient-specific data collected and collated according to selected demographic, academic, residential (home address) and financial assistance variable subcategories (non-abridged or abridged format) as well as the clinical (diagnostic) variable for overall student attendees where the preceding ANOVA produced a statistically significant result for the study group (students presenting at the UCT-SHS-MHS with psychological or psychiatric complaints). These statistical techniques, where appropriate, would determine where there are significant differences between the mean number of consultations per patient according to all (and not just hypothesis-specific) subcategories of the individual selected variables.

Chapter 5

RESULTS

This chapter is divided into two sections. The first section details objective-specific (viz. patients (attendees) – Objective 1; patients versus controls – Objective 2; patients versus total student community – Objective 3 and number of consultations – Objective 4) results for overall student attendees and selected demographic, academic, residential (home address), financial assistance and, where appropriate, clinical (diagnostic) variables. The second section provides the results of a series of multivariate logistic regression models constructed for Objectives 2 and 3 which determine the associations between attendance at the UCT-SHS-MHS and the selected demographic, academic, residential (home address) and financial assistance variables.

The candidate has purposely adopted a structural layout for this section of the Results chapter (whose structure largely resembles that of section 3.3 in the Literature Review and section 6.2 in the Discussion chapter) that will permit maximum inter- and intra-variable comparison. Refer to corresponding box in section 3.3 for further details.

5.1 OVERALL STUDENT ATTENDEES AND SELECTED VARIABLES

This section of the Results chapter is divided into six subsections. The first subsection documents patient-specific results for Objectives 1, 2, 3 and 4 and clinical/diagnostic-specific results for Objectives 1, 3 and 4 relating to overall student attendees. The second, third, fourth and fifth subsections detail further patient-specific and clinical/diagnostic-specific results relating to selected demographic (gender, race/population group, race/population group and gender combined, age and language), selected academic (faculty, level of study and year of study), residential (home address) and financial assistance variables, respectively. The sixth subsection is a summary which combines the above variable-specific results into a series of objective-specific UCT-SHS-MHS patient profiles.

5.1.1 Overall Student Attendees

5.1.1.1 Objective 1 (attendees)

(a) Patient-specific data

There were 932 students who attended the UCT-SHS-MHS from 1991 to 1993 of whom 27 were defined as missing responses. The details of these UCT-SHS-MHS attendees were not recorded by the UCT Central Admissions Office as proof of registration at the University of Cape Town during the study period.

(b) Clinical/diagnostic-specific data

Table 5.1 demonstrates and Figure 5.1 illustrates that 920 individual diagnoses were made for 905 documented patients attending the UCT-SHS-MHS from 1991 to 1993. Thirteen patients had two coexisting diagnoses while one patient had three. There was a wide range of diagnoses as all 28 individual diagnoses were used by UCT-SHS-MHS therapists. The most common major diagnostic category was adjustment disorder followed by V-codes, anxiety (neurotic) disorder, "other" disorders and affective disorders, respectively. For overall student attendees, adjustment disorder with mixed emotional features (PJM – 147 patients), adjustment disorder with depressed mood (PJD – 103 patients) and generalised anxiety disorder (PNG – 101 patients) were the only individual diagnoses responsible for greater than 100 entries. In addition, relationship problem (PVR – 88 patients), reactive dysthymia (PAD – 58 patients) and extra time assessment (PET – 51 patients) recorded in excess of 50 entries.

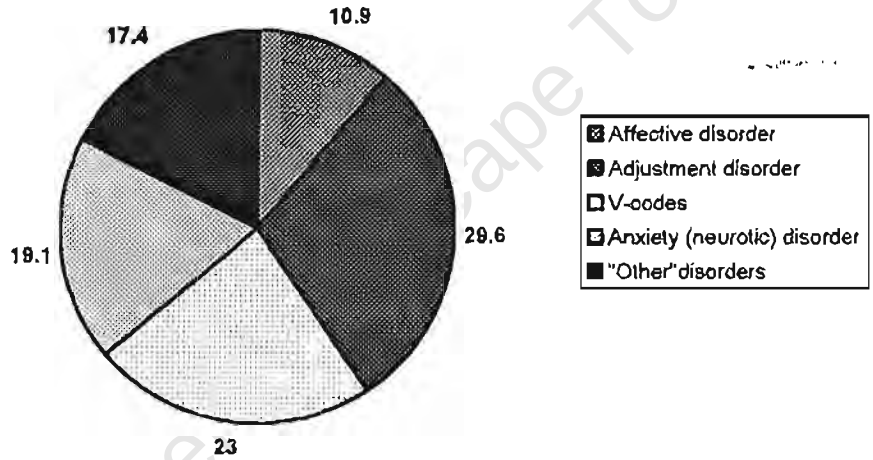
Table 5.1 Diagnoses of overall students (N=932) presenting at the UCT-SHS-MHS (1991-1993).

Diagnoses	Total	
	n	%
Affective disorder		
Bipolar affective disorder (PAB)	1	0,1
Major depressive disorder (PAM)	41	4,5
Dysthymia (reactive) (PAD)	58	6,3
Subtotal	100	10,9
Adjustment disorder		
Adjustment disorder with depressed mood (PJD)	103	11,2
Adjustment disorder with mixed emotional features (PJM)	147	16,0
Adjustment disorder with academic inhibition (PJA)	22	2,4
Subtotal	272	29,6
V-codes		
Relationship problem (PVR)	88	9,6
Family problem (PVF)	50	5,4
Complicated bereavement (PVB)	26	2,8
Pre- and post-termination counselling (for unplanned/unwanted pregnancy) (PVP)	28	3,0
Academic problem (PVA)	20	2,2
Subtotal	212	23,0
Anxiety (neurotic) disorder		
Obsessive-compulsive disorder (PNO)	3	0,3
Panic disorder (PNP)	14	1,5
Post-traumatic stress syndrome (disorder) (PNT)	16	1,7
Generalised anxiety disorder (PNG)	101	11,0
Examination anxiety (PNE)	37	4,0
Phobia/Phobic anxiety (PNF+PF)	4	0,4

Hysterical disorder (PNH)	1	0,1
Subtotal	176	19,1
"Other" disorders		
Psychosis (PP)	6	0,6
Anorexia (PEA)	5	0,5
Bulimia (PEB)	20	2,2
Personality disorder (PPD)	16	1,7
Alcohol abuse (PSA)	9	1,0
Drug abuse (PSD)	1	0,1
Sexual dysfunction (PSX)	10	1,1
Gender issues (PG)	11	1,2
Extra time assessment (PET)	51	5,5
Other (PO)	31	3,4
Subtotal	160	17,4

Number of missing responses = 27 for patients and 31 for diagnoses.

Figure 5.1 Pie diagram of the distribution of major diagnostic categories (N=5) in students presenting at the UCT-SHS-MHS (1991-1993).



Refer to Table 5.1 for number of patients recording each individual major diagnostic category.

5.1.1.2 Objective 2 (patients versus controls)

In addition to the 905 registered students who attended the UCT-SHS-MHS from 1991 to 1993, there were 1 924 students who presented at the UCT-SHS with medical complaints who did NOT attend the UCT-SHS-MHS during this period of whom 5 were defined as missing responses. The details of these UCT-SHS attendees were not recorded by the UCT Central Admissions Office as proof of registration at the University of Cape Town from 1991 to 1993.

5.1.1.3 Objective 3 (patients versus the total student community)

(a) Patient-specific data

In addition to the 905 registered students who attended the UCT-SHS-MHS from 1991 to 1993, there were 23 158 students recorded by the UCT Central Admissions Office as being registered at the University of Cape Town during the study period. The overall usage/utilisation rate per 1 000 registered University of Cape Town students is 39,08 for the 905 registered students who attended the UCT-SHS-MHS from 1991 to 1993.

(b) Clinical/diagnostic-specific data

Table 5.2 demonstrates that, amongst the major diagnostic categories, adjustment disorder was responsible for the highest usage/utilisation (prevalence) rate per 1 000 students followed by V-codes, anxiety (neurotic) disorder, "other" disorders and affective disorder, respectively. Amongst the individual V-codes, which represent the second most important major diagnostic category, relationship problem recorded the highest usage/utilisation (prevalence) rate followed by family problem, pre- and post termination counselling for unplanned/unwanted pregnancy, complicated bereavement and academic problem, respectively. Amongst the selected "other" disorders, which represent the most commonly reported conditions outside the remaining four major diagnostic categories, bulimia recorded the highest usage/utilisation (prevalence) rate (equal to that documented by academic problem – the least common V-code presenting at the UCT-SHS-MHS during the study period) followed by personality disorder, alcohol abuse and sexual dysfunction (equal rates), psychosis, anorexia and drug abuse, respectively.

Table 5.2 Usage/utilisation (prevalence) rate per 1 000 students presenting at the UCT-SHS-MHS (1991-1993).

(a) Major diagnostic categories	
Diagnoses	**Usage/utilisation (prevalence) rate per 1 000 students**
Affective disorders (PA-)	4,3
Adjustment disorders (PJ-)	11,7
V-codes (PV-)	9,2
Anxiety (neurotic) disorders (PN-)	7,6
"Other" disorders	6,9
Total	39,7
(b) Individual V-codes	
Diagnoses	**Usage/utilisation (prevalence) rate per 1 000 students**
Relationship problem (PVR)	3,8
Family problem (PVF)	2,2
Complicated bereavement (PVB)	1,1
Pre- and post termination counselling for unplanned/unwanted pregnancy (PVP)	1,2
Academic problem (PVA)	0,9
Subtotal	9,2

(c) Selected "other" disorders	
Diagnoses	**Usage/utilisation (prevalence) rate per 1 000 students**
Psychosis (PP)	0,3
Anorexia (PEA)	0,2
Bulimia (PEB)	0,9
Personality disorder (PPD)	0,7
Alcohol abuse (PSA)	0,4
Drug abuse (PSD)	0,0
Sexual dysfunction (PXS)	0,4
Subtotal	2,9

Number of missing responses = 27 for patients and 31 for diagnoses.

5.1.1.4 Objective 4 (number of consultations)

(a) Patient-specific data

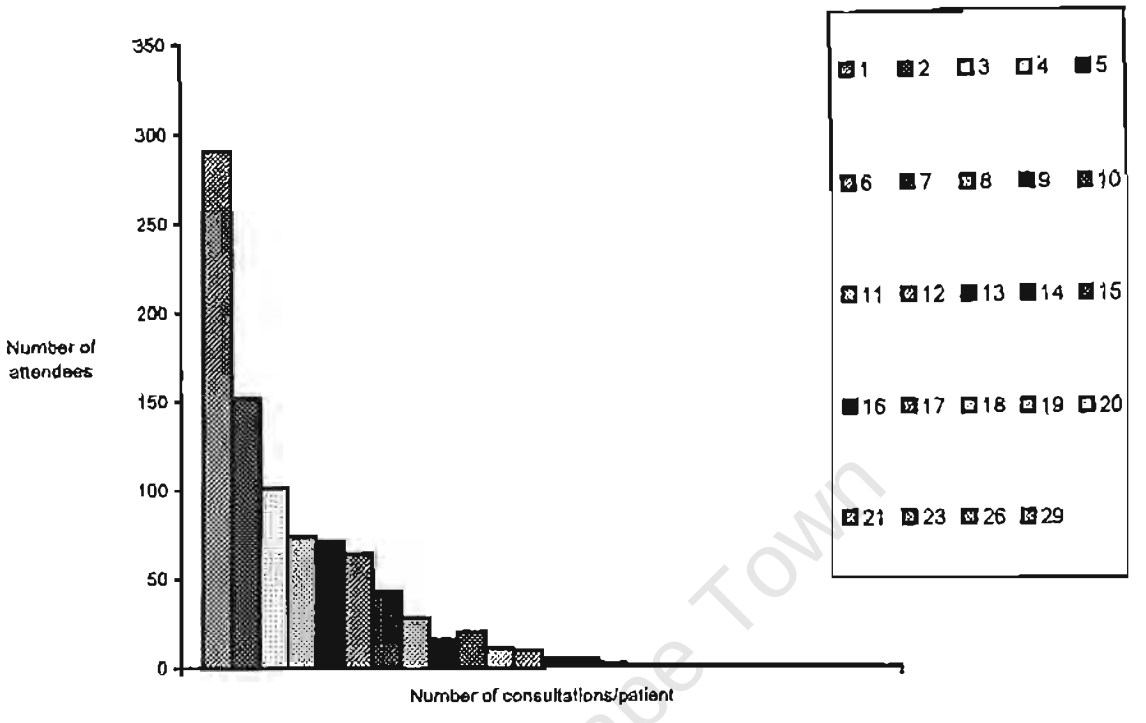
The mean number of consultations per student is 3,80 for the 905 registered students who attended the UCT-SHS-MHS from 1991 to 1993 as the total number of consultations is 3 441. Table 5.3 demonstrates and Figure 5.2 illustrates that the vast majority of these attendees (83,4 per cent) required six or less sessions at the UCT-SHS-MHS for evaluation and/or therapeutic intervention. The mean number of consultations per student is 3,79 with a standard deviation of 3,48. The median was three consultations per student with an interquartile range between one and five consultations.

Table 5.3 Overall distribution of number of consultations per patient (N=932) and total number of consultations (N=3 441) in students presenting at the UCT-SHS-MHS (1991-1993).

Number of consultations/patient	n_1	$\%_1$	n_4	$\%_4$
1	291	32,2	291	8,5
2	152	16,8	304	8,8
3	101	11,2	303	8,8
4	74	8,2	296	8,6
5	71	7,9	355	10,3
6	64	7,1	384	11,2
7	43	4,8	301	8,7
8	28	3,1	224	6,5
9	16	1,8	144	4,2
10	20	2,2	200	5,8
11	11	1,2	121	3,5
12	10	1,1	120	3,5
>12	24	2,7	398	11,6
Total	905	100,0	3 441	100,0

Number of missing responses = 27.
n_1 and $\%_1$ refer to patients.
n_4 and $\%_4$ refer to consultations.

Figure 5.2 Bar graph of the distribution of number of consultations per patient (N=932) in students presenting at the UCT-SHS-MHS (1991-1993).



Refer to Table 5.3 for number of patients recording each individual number of consultations.

(b) Clinical/diagnostic-specific data

Table 5.4 demonstrates that an adjusted total of 3 511 consultations were made for 920 individual diagnoses recorded at the initial consultation of 905 documented patients attending the UCT-SHS-MHS from 1991 to 1993 – a mean of 3,82 consultations per diagnosis (as opposed to 3,79 consultations per patient for 3 441 consultations – therefore, these 15 additional diagnoses required a further 70 consultations resulting in a mean of 4,67 consultations per additional diagnosis) with a range of 1 to 29 consultations. Affective disorders were responsible for the highest mean number of consultations per major diagnostic category followed by adjustment disorders, V-codes, anxiety (neurotic) disorders and "other" disorders. Adjustment disorders, on the other hand, were responsible for the highest total number of consultations followed by V-codes, anxiety (neurotic) disorders, affective disorders and "other" disorders. Table 5.5 demonstrates that the major diagnostic categories did produce a statistically significant (p=0,000) result in the mean number of consultations required by the student. Table 5.6 demonstrates that, for pairwise comparisons, affective disorder versus each of the four other major diagnostic categories (viz. adjustment disorder, V-codes, anxiety (neurotic) disorder and "other" disorders) and adjustment disorder versus "other" disorders produce statistically significant results.

Table 5.4 Frequency, percentages, mean number and range of consultations (N=3 441) for major diagnostic categories in students presenting at the UCT-SHS-MHS (1991-1993).

Major diagnostic categories	n	%	No of consultations		Range
			mean	SD	
Affective disorder	568	16,2	5,7	4,4	1 to 29 consultations
Adjustment disorder	1 118	31,8	4,1	3,7	1 to 26 consultations
V-codes	758	21,6	3,6	3,1	1 to 15 consultations
Anxiety (neurotic) disorder	594	16,9	3,4	3,1	1 to 16 consultations
"Other" disorders	473	13,5	3,0	2,5	1 to 12 consultations
Total	3 511	100,0	3,8	3,5	1 to 29 consultations

Table 5.5 ANOVA summary table for the mean number of consultations by major diagnostic category in students presenting at the UCT-SHS-MHS (1991-1993).

Major diagnostic category	Df	Sum of squares	Mean square	F-ratio	Prob > F
Regression model	4	545,3	136,3	11,98	$0,000^{Sig}$
Error	916	10 768,9	11,4		
Corrected total	920	11 314,2			

$R^2 = 0,048$

Table 5.6 Tukey pairwise comparisons for mean number of consultations by major diagnostic categories in students presenting at the UCT-SHS-MHS (1991-1993).

Major diagnostic category	Difference between means (with 95% CI)
Affective disorder	
Adjustment disorder	$+1,524\ (+0,471 - +2,576)^{Sig}$
V-codes	$+1,992\ (+0,899 - +3,086)^{Sig}$
Anxiety (neurotic) disorder	$+2,168\ (+1,039 - +3,297)^{Sig}$
"Other" disorders	$+2,731\ (+1,591 - +3,871)^{Sig}$
Adjustment disorder	
V-codes	$+0,469\ (-0,368 - +1,305)^{NS}$
Anxiety (neurotic) disorder	$+0,645\ (-0,238 - +1,527)^{NS}$
"Other" disorders	$+1,207\ (+0,311 - +2,104)^{Sig}$
V-codes	
Anxiety (neurotic) disorder	$+0,176\ (-0,755 - +1,107)^{NS}$
"Other" disorders	$+0,739\ (-0,205 - +1,683)^{NS}$
Anxiety (neurotic) disorder	
"Other" disorders	$+0,563\ (-0,422 - +1,548)^{NS}$

$\alpha = 0,05$; df = 915; MSE = 11,4
Critical value of Studentized Range = 3,865

5.1.2 Demographic Variables

5.1.2.1 Gender

(a) Objective 1 (attendees) – Descriptive data

(i) Patient-specific data

Table 5.7 demonstrates that there was a greater number of female students than male students (by 40,1 per cent) who attended the UCT-SHS-MHS from 1991 to 1993.

Table 5.7 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) stratified by gender.

Gender	n	%
Males	377	41,7
Females	528	58,3
Total	905	100,0

Number of missing responses = 27.

(ii) Clinical/diagnostic-specific data

Table 5.8 demonstrates and Figures 5.3(a) and (b) illustrate that 920 individual diagnoses were made for 905 documented patients attending the UCT-SHS-MHS from 1991 to 1993. Thirteen patients (3 males and 10 females) had two co-existing diagnoses while one male patient had three. There was a wide range of diagnoses as all 28 individual diagnoses were used by UCT-SHS-MHS therapists. The most common major diagnostic category, for both males and females, was adjustment disorder. For male students, generalised anxiety (PNG – 53 patients) and adjustment disorder with mixed emotional features (PJM – 51 patients) predominated while adjustment disorder with mixed emotional features (PJM – 96 patients) and adjustment disorder with depressed mood (PJD – 65 patients) ranked highest for female students. For both male and female students, adjustment disorder with mixed emotional features (PJM), relationship problems (PVR) and generalised anxiety disorder (PNG) were the leading adjustment disorder, V-code and anxiety (neurotic) disorder, respectively. Major depressive disorder (PAM) was the most frequently coded affective disorder for male students with reactive dysthymia (PAD) for female students. Extra time assessment (PET) was the main "other" disorder for male students with bulimia (PEB) for female students. Individual mental disorders compatible with severe psychopathology (e.g. psychosis (PP) and bipolar affective disorder (PAB)) were represented in UCT-SHS-MHS attendees (the former predominantly in male students and the latter in a solitary female student) although they were not commonly reported.

The following conditions appeared to be more common amongst female students:

- Reactive dysthymia (PAD)
- Adjustment disorder with mixed emotional features (PJM)
- Relationship problems (PVR)*
- Family problems (PVF)*
- Pre- and post-termination counselling for unplanned/unwanted pregnancies (PVP)* – although two partners also attended
- Post-traumatic stress syndrome (disorder) (PNT)
- Eating disorders
  - Anorexia (PEA)
  - Bulimia (PEB)*

*This gender-specific result is statistically significant.

It is noteworthy, however, that anxiety (neurotic) disorders were not more common amongst female students.

The following conditions appeared to affect more male students:

- Academic problem (PVA)*
- Generalised anxiety disorder (PNG)
- Alcohol abuse (PSA)*
- Sexual dysfunction (PSX)*
- Gender issues (PG)*
- Extra time assessment (PET)*

*This gender-specific result is statistically significant.

The following mental disorders also produced statistically significant gender-specific results although the difference between male and female student attendees is only less than or equal to five UCT-SHS-MHS patients:

- Obsessive compulsive disorder (PNO)
- Generalised anxiety disorder (PNG)
- Psychosis (PP)

A: Major diagnostic categories

Table 5.8 demonstrates that female students were diagnosed as presenting at the UCT-SHS-MHS with a greater number of affective disorder, adjustment disorder, V-codes and total (combined) disorders than male students (by 85,7; 74,7; 126,2 and 40,8 per cent, respectively) – however, only adjustment disorder, V-codes and total (combined) diagnoses produced statistically significant (p=0,041; 0,000 and 0,000, respectively) differences. On the other hand, male students recorded more "other" disorders than female students (by 46,2 per cent) – this difference was statistically significant (p=0,000). The number of diagnoses for the major diagnostic category of anxiety (neurotic) disorders were tied.

B: Individual V-codes

Table 5.8 demonstrates that female students were diagnosed as presenting at the UCT-SHS-MHS with a greater number of relationship problem, family problem, complicated bereavement, pre- and post-termination counselling for unplanned/unwanted pregnancy and total (combined) V-codes than male students (by 138,5; 184,6; 88,9; 1 200,0 and 126,2 per cent, respectively) – however, only relationship problem, family problem, pre- and post-termination counselling for unplanned/unwanted pregnancy and total (combined) V-codes produced statistically significant (p=0,017; 0,022, 0,000 and 0,000, respectively) differences. On the other hand, male students recorded more academic problems than female students (by 200,0 per cent) – this difference was statistically significant (p=0,002).

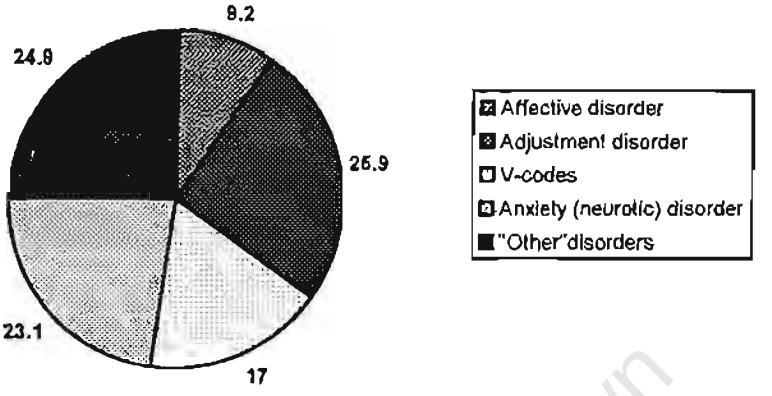
Table 5.8 Diagnoses of male (N=377) and female (N=528) students presenting at the UCT-SHS-MHS (1991-1993).

Diagnoses	Male students		Female students		Unadjusted OR (with 95% CI)	Df	χ^2	p
	n	%	n	%				
Affective disorder								
Bipolar affective disorder (PAB)	0	0,0	1	0,2	0,0 (0,0 - 24,4)	1	0,7	0,399[NS]
Major depressive disorder (PAM)	18	4,7	23	4,3	1,1 (0,6 - 2,2)	1	0,1	0,752[NS]
Dysthymia (reactive) (PAD)	17	4,5	41	7,6	0,6 (0,3 - 1,0)	1	3,8	0,051[NS]
Subtotal	35	9,2	65	12,1	0,7 (0,5 - 1,2)	1	2,0	0,161[NS]
Adjustment disorder								
Adjustment disorder with depressed mood (PJD)	38	9,9	65	12,1	0,8 (0,5 - 1,3)	1	1,0	0,312[NS]
Adjustment disorder with mixed emotional features (PJM)	51	13,4	96	17,8	0,7 (0,5 - 1,0)	1	3,4	0,067[NS]
Adjustment disorder with academic inhibition (PJA)	10	2,6	12	2,2	1,2 (0,5 - 3,0)	1	0,1	0,705[NS]
Subtotal	99	25,9	173	32,2	0,7 (0,6 - 1,0)	1	4,2	0,041[Sig]
V-codes								
Relationship problem (PVR)	26	6,8	62	11,5	0,6 (0,3 - 0,9)	1	5,8	0,017[Sig]
Family problem (PVF)	13	3,4	37	6,9	0,5 (0,2 - 0,9)	1	5,3	0,022[Sig]
Complicated bereavement (PVB)	9	2,3	17	3,2	0,7 (0,3 - 1,8)	1	0,5	0,468[NS]
Pre- and post-termination counselling (for unplanned/unwanted pregnancy) (PVP)	2	0,5	26	4,8	0,1 (0,0 - 0,5)	1	14,1	0,000[Sig]
Academic problem (PVA)	15	3,9	5	0,9	4,4 (1,5 - 13,8)	1	9,4	0,002[Sig]
Subtotal	65	17,0	147	27,3	0,6 (0,4 - 0,8)	1	13,4	0,000[Sig]
[						4	26,5	0,000[Sig][1]
Anxiety (neurotic) disorder								
Obsessive-compulsive disorder (PNO)	3	0,8	0	0,0	-	1	4,2	0,040[Sig]
Panic disorder (PNP)	7	1,8	7	1,3	1,4 (0,4 - 4,5)	1	0,4	0,517[NS]
Post-traumatic stress syndrome (disorder) (PNT)	3	0,8	13	2,4	0,3 (0,1 - 1,2)	1	3,5	0,062[NS]
Generalised anxiety disorder (PNG)	53	13,9	48	8,9	1,6 (1,1 - 2,5)	1	5,6	0,018[Sig]
Examination anxiety (PNE)	18	4,7	19	3,5	1,4 (0,7 - 2,7)	1	0,8	0,369[NS]
Phobia/Phobic anxiety (PNP+PF)	3	0,8	1	0,2	4,3 (0,4 - 106,4)	1	1,9	0,173[NS]
Hysterical disorder (PNH)	1	0,3	0	0,0	-	1	1,4	0,235[NS]
Subtotal	88	23,1	88	16,4	1,5 (1,1 - 2,2)	1	6,4	0,011[Sig]
"Other" disorders								
Psychosis (PP)	5	1,3	1	0,2	7,1 (0,8 - 161,8)	1	4,4	0,037[Sig]
Anorexia (PEA)	0	0,0	5	0,9	0,0 (0-,0 - 1,6)	1	3,6	0,059[NS]
Bulimia (PEB)	0	0,0	20	3,7	0,0 (0,0 - 0,3)	1	14,5	0,000[Sig]
Personality disorder (PPD)	7	1,8	9	1,7	1,1 (0,4 - 3,2)	1	0,0	0,855[NS]
Alcohol abuse (PSA)	7	1,8	2	0,4	5,0 (1,0 - 35,0)	1	4,9	0,027[Sig]
Drug abuse (PSD)	1	0,3	0	0,0	-	1	1,4	0,235[NS]
Sexual dysfunction (PSX)	9	2,4	1	0,2	13,0 (1,7 - 274,2)	1	9,8	0,002[Sig]
Gender issues (PG)	10	2,6	1	0,2	14,4 (1,0 - 302,7)	1	11,2	0,001[Sig]
Extra time assessment (PET)	38	9,9	13	2,4	4,5 (2,3 - 9,0)	1	24,2	0,000[Sig]
Other (PO)	18	4,7	13	2,4	2,0 (0,9 - 4,4)	1	3,6	0,057[NS]
Subtotal	95	24,9	65	12,1	2,4 (1,7 - 3,5)	1	25,4	0,000[Sig]
Total	382	100,0	538	100,0	-	4	41,2	0,000[Sig 2]

Number of missing responses = 27 for patients and 31 for diagnoses.
[1]Test for statistical significance of individual V-codes.
[2]Test for statistical significance of major diagnostic categories.

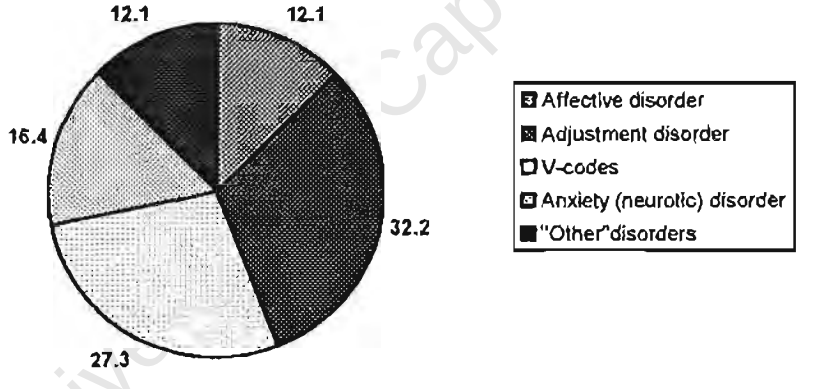
Figure 5.3 Pie diagrams of the distribution of major diagnostic categories (N=5) in students presenting at the UCT-SHS-MHS (1991-1993) stratified by gender.

(a) Male student attendees



Refer to Table 5.8 for number of patients recording each individual major diagnostic category.

(b) Female student attendees



Refer to Table 5.8 for number of patients recording each individual major diagnostic category.

(b) Objective 2 (patients versus controls) and Objective 3 (patients versus the total student community)

Research Hypothesis Ia of the UCT-SHS study is as follows:

Female students are more likely to present with mental disorders at the UCT-SHS-MHS than males.

In these objectives Research Hypothesis Ia is either confirmed or rejected according to the unadjusted odds ratio or χ^2 test (p-value) for UCT-SHS-MHS attendees (patients) versus UCT-SHS medical attendees (controls) [Objective 2] or to additional usage/utilisation (prevalence) rates per 1 000 students and utilisation (prevalence) ratios for either clinical diagnoses or patients versus registered UCT students (the total student community) [Objective 3].

(i) Patient-specific data

Table 5.9 demonstrates that female students are more likely than male students to present at the UCT-SHS-MHS than attend the UCT-SHS with purely medical complaints as reflected by a statistically significant (p=0,000) positive OR for patients versus controls which corresponds to a likelihood ratio ($\%_1$:$\%_2$) of 1,372. In fact, female students are 22,6 per cent overrepresented (with a standardised residual of +4,7) and male students 20,5 per cent underrepresented (with a standardised residual of -4,5) among UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0.

In addition, the results in Table 5.10 suggest that female students are more likely than male students to present at the UCT-SHS-MHS as reflected by a statistically significant (p=0,000) positive OR for patients versus total student community which corresponds to a likelihood ratio ($\%_1$:$\%_3$) of 1,391. Here female students are 37,2 per cent overrepresented (with a standardised residual of +7,3) and male students 27,5 per cent underrepresented (with a standardised residual of -6,3) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0. These findings therefore confirm Research Hypothesis Ia for Objectives 2 and 3 of the UCT-SHS study.

Table 5.9 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of controls (N=1 924) stratified by gender.

(a) Unadjusted ORs and $\chi 2$ tests

Gender	n_1	$\%_1$	n_2	$\%_2$	Unadjusted OR (with 95% CI)	Df	χ^2	p
Males	377	41,7	1 103	57,5	-	-	-	-
Females	528	58,3	816	42,5	1,9 (1,6 - 2,2)	1	61,7	0,000[Sig]
Total	905	100,0	1 919	100,0	-	-	-	-

(b) Expected frequencies

Gender	Observed frequency$_1$	Expected frequency$_1$	Difference between observed and expected frequency$_1$	Observed frequency$_2$	Expected frequency$_2$	Difference between observed and expected frequency$_2$
Males	377	474,3	-97,3 (-20,5%)	1 103	1 005,7	+97,3 (+9,7%)
Females	528	430,7	+97,3 (+22,6%)	816	913,3	-97,3 (-10,7%)
Total	905	905,0	-	1 919	1 919,0	-

Number of missing responses = 27 for patients and 5 for controls.
n_1 and $\%_1$ refer to patients.
Observed frequency$_1$ and expected frequency$_1$ refer to patients.
n_2 and $\%_2$ refer to controls.
Observed frequency$_2$ and expected frequency$_2$ refer to controls.

Table 5.10 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of the total student community (N=23 158) stratified by gender.

(a) Unadjusted ORs and $\chi 2$ tests

Gender	n_1	$\%_1$	n_3	$\%_3$	Unadjusted OR (with 95% CI)	Df	χ^2	p
Males	377	41,7	13 450	58,1	-	-	-	-
Females	528	58,3	9 706	41,9	2,0 (1,7 - 2,3)	1	104,4	0,000[Sig]
Total	905	100,0	23 156	100,0	-	-	-	-

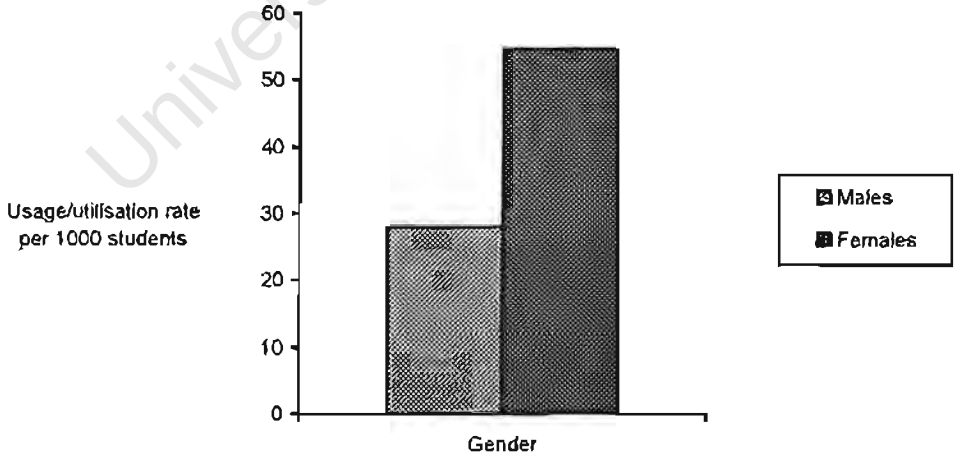
(b) Expected frequencies

Gender	Observed frequency$_1$	Expected frequency$_1$	Difference between observed and expected frequency$_1$	Observed frequency$_3$	Expected frequency$_3$	Difference between observed and expected frequency$_3$
Males	377	520,1	-143,1 (-27,5%)	13 450	13 306,9	+143,1 (+1,1%)
Females	528	384,9	+143,1 (+37,2%)	9 706	9 849,1	-143,1 (-1,5%)
Total	905	905,0	-	23 156	23 156,0	-

Number of missing responses = 27 for patients and 2 for total student community.
n_1 and $\%_1$ refer to patients.
Observed frequency$_1$ and expected frequency$_1$ refer to patients.
n_3 and $\%_3$ refer to the total student community.
Observed frequency$_3$ and expected frequency$_3$ refer to the total student community.

Figure 5.4 illustrates and Table 5.11 demonstrates that female students have a considerably higher usage/utilisation rate and, consequently, utilisation ratio than male students (by 94,3 and 93,1 per cent, respectively). This patient-specific finding, therefore, is compatible with Research Hypothesis Ia of the UCT-SHS study.

Figure 5.4 Usage/utilisation rate per 1 000 students in students presenting at the UCT-SHS-MHS (1991-1993) stratified by gender.



Refer to Table 5.11 for values of usage/utilisation rates.

Table 5.11 Usage/utilisation rate per 1 000 students and utilisation ratio in students presenting at the UCT-SHS-MHS (1991-1993) stratified by gender.

Gender	Usage/utilisation rate per 1 000 students	Deviation from mean usage/utilisation rate per 1 000 students	Utilisation ratio
Males	28,0	-11,1	0,72
Females	54,4	+15,3	1,39
Mean	39,1	-	1,00

(ii) Clinical/diagnostic-specific data

A: Major diagnostic categories

Table 5.12 demonstrates that, for affective disorder, adjustment disorder, V-codes, anxiety (neurotic) disorder and total (combined) disorders, female students have a generally considerably higher usage/utilisation (prevalence) rate and, consequently, utilisation (prevalence) ratio than male students (by 157,7 and 160,0 per cent for affective disorder, by 143,8 and 142,9 per cent for adjustment disorder, by 214,6 and 215,4 per cent for V-codes, by 40,0 and 39,5 per cent for anxiety (neurotic) disorder and by 95,1 and 94,4 per cent for total (combined) disorders). The only exception to this trend is "other" disorders where the usage/utilisation (prevalence) rate and utilisation (prevalence) ratio are 6,0 and 6,2 per cent, respectively, higher for male students. These clinical findings therefore are consistent with Research Hypothesis Ia for affective disorder, adjustment disorder, V-codes and total (combined) disorders but are not consistent with Research Hypothesis Ia for "other disorders".

Table 5.12 Usage/utilisation (prevalence) rate per 1 000 students and utilisation (prevalence) ratio for major diagnostic categories in students presenting at the UCT-SHS-MHS (1991-1993) stratified by gender.

(a) Affective disorder			
Gender	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Males	2,6	-1,7	0,60
Females	6,7	+2,4	1,56
Mean	4,3	-	1,00
(b) Adjustment disorder			
Gender	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Males	7,3	-4,3	0,63
Females	17,8	+6,2	1,53
Mean	11,6	-	1,00
(c) V-codes			
Gender	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Males	4,8	-4,4	0,52
Females	15,1	+5,9	1,64
Mean	9,2	-	1,00
(d) Anxiety (neurotic) disorder			
Gender	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Males	6,5	-1,1	0,86
Females	9,1	+1,5	1,20
Mean	7,6	-	1,00

(e) "Other" disorder			
Gender	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Males	7,1	+0,2	1,03
Females	6,7	-0,2	0,97
Mean	6,9	-	1,00
(f) Total (combined) disorders			
Gender	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Males	28,4	-11,3	0,72
Females	55,4	+15,7	1,40
Mean	39,7	-	1,00

Number of missing responses = 27 for patients and 31 for diagnoses.

B: Individual V-codes

Table 5.13 demonstrates that for relationship problem, family problem, complicated bereavement, pre- and post-termination counselling for unplanned/unwanted pregnancy and total (combined) V-codes, female students have a generally considerably higher usage/utilisation (prevalence) rate and, consequently, utilisation (prevalence) ratio than male students (by 236,8 and 236,0 per cent for relationship problem, by 280,0 and 284,4 per cent for family problem, by 157,1 and 156,3 per cent for complicated bereavement, by 2 600,0 and 2 712,5 per cent for pre- and post-termination counselling for unplanned/unwanted pregnancy and 214,6 and 215,4 per cent for total (combined) V-codes. The only exception to this trend is academic problem where the usage/utilisation (prevalence) rate and utilisation (prevalence) ratio are 120,0 and 117,9 per cent, respectively, higher for male students. These clinical findings therefore are consistent with Research Hypothesis Ia for relationship problem, family problem, complicated bereavement, pre- and post-termination counselling for unplanned/unwanted pregnancy and total (combined) V-codes, but are not consistent with Research Hypothesis Ia for academic problem.

Table 5.13 Usage/utilisation (prevalence) rate per 1 000 students and utilisation (prevalence) ratio for individual V-codes in students presenting at the UCT-SHS-MHS (1991-1993) stratified by gender.

(a) Relationship problem			
Gender	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Males	1,9	-1,9	0,50
Females	6,4	+2,6	1,68
Mean	3,8	-	1,00
(b) Family problem			
Gender	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Males	1,0	-1,2	0,45
Females	3,8	+1,6	1,73
Mean	2,2	-	1,00
(c) Complicated bereavement			
Gender	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Males	0,7	-0,4	0,64
Females	,8	+0,7	1,64
Mean	1,1	-	1,00

(d) Pre- and post-termination counselling for unplanned/unwanted pregnancy			
Gender	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Males	0,1	-1,1	0,08
Females	2,7	+1,5	2,25
Mean	1,2	-	1,00
(e) Academic problem			
Gender	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Males	1,1	+0,2	1,22
Females	0,5	-0,4	0,56
Mean	0,9	-	1,00
(f) Total (combined) V-codes			
Gender	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Males	4,8	-4,4	0,52
Females	15,1	+5,9	1,64
Mean	9,2	-	1,00

Number of missing responses = unknown.

(c) Objective 4 (number of consultations)

Research Hypothesis Ib of the UCT-SHS study is as follows:

> *Female students are likely to require more consultations for mental disorders at the UCT-SHS-MHS than males.*

In this objective Research Hypothesis Ib is either confirmed or rejected according to the mean number of consultations for UCT-SHS-MHS attendees (patients).

Table 5.14 demonstrates that 3 441 individual consultations were made by 905 documented patients attending the UCT-SHS-MHS from 1991 to 1993 – a mean of 3,8 consultations per patient with a range of 1 to 29 consultations. The mean number of consultations per student and the total number of consultations is higher for female than male students. The former is a statistically significant finding (p=0,001). This finding therefore confirms Research Hypothesis Ib for Objective 4 of the UCT-SHS study.

Table 5.14 Frequency, percentages, mean number and range of consultations (N=3 441) in students presenting at the UCT-SHS-MHS (1991-1993) stratified by gender.

Gender	**n**	**%**	**No. of cons**		**Range**	**Df**	**t**	**p**
			mean	**SD**				
Males	1 270	36,9	3,4	3,1	1 to 26 consultations	903,0	3,21	0,001[Sig]
Females	2 171	63,1	4,1	3,7	1 to 29 consultations	-	-	-
Total/Ho	3 441	100,0	3,8	3,5	1 to 29 consultations	-	-	-

Number of missing responses = 27 for patients.

5.1.2.2 Race/population group

(a) Objective 1 (attendees) – Descriptive data

(i) Non-abridged format

– Patient-specific data

Table 5.15 demonstrates that White students were responsible for the greatest number of attendees at the UCT-SHS-MHS from 1991 to 1993 followed by African, Coloured and Indian students.

Table 5.15 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) stratified by race/population group.

Race/population group[1]	n	%
Africans	271	29,9
Coloureds	121	13,4
Indians	36	4,0
Whites	477	52,7
Total	905	100,0

Number of missing responses = 27.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.

– Clinical/diagnostic-specific data

Table 5.16 demonstrates and Figures 5.5(a), (b), (c) and (d) illustrate that 920 individual diagnoses were made for 905 documented patients attending the UCT-SHS-MHS from 1991 to 1993. Thirteen patients (3 Coloureds, 1 Indian and 9 Whites) had two coexisting diagnoses while one White patient had three. There was a wide range of diagnoses as all 28 individual diagnoses were used by UCT-SHS-MHS therapists. The most common major diagnostic category, for Coloured and White students, was adjustment disorder while V-codes and anxiety (neurotic) disorders were most prevalent amongst African and Indian students, respectively. For African students, generalised anxiety (PNG – 43 patients) and adjustment disorder with mixed emotional features (PJM – 33 patients) predominated while adjustment disorder with mixed emotional features (PJM – 22 patients) and family problems (PVF – 15 patients) ranked highest for Coloured students, adjustment disorder with mixed emotional features (PJM – 9 patients) and relationship problems (PVR – 5 patients) recorded the most of a low number of diagnoses for Indian students and adjustment disorder with mixed emotional features (PJM – 83 patients) and adjustment disorder with depressed mood (PJD – 66 patients) reported the most of a high number of diagnoses for White students. For African, Coloured, Indian and White students reactive dysthymia (PAD), adjustment disorder with mixed emotional features (PJM) and generalised anxiety disorder (PNG) were the leading affective disorder, adjustment disorder and anxiety (neurotic) disorder, respectively. Relationship problems (PVR) was the most frequently coded V-code for African, Indian and White students with family problems for Coloured students while other (PO), personality disorder (PPD), gender issues (PG), sexual dysfunction (PXS) and extra time assessment (PET) were the main "other" disorder for African, Coloured, Indian and White students respectively. Individual mental

disorders compatible with severe psychopathology (e.g. psychosis – PP, and bipolar affective disorder – PAB) were represented in UCT-SHS-MHS attendees (the former predominantly in African students and the latter in a solitary White student) although they were not commonly reported.

The following conditions appeared to be more common amongst the different race/population groups:

African students –

- Pre- and post-termination counselling for unplanned/unwanted pregnancies (PVP)
- Generalised anxiety disorder (PNG)
- Alcohol abuse (PSA)

Coloured students –

- Pre- and post-termination counselling for unplanned/unwanted pregnancies (PVP)

White students –

- Eating disorders
  - Anorexia (PEA)
  - Bulimia (PEB)
- Extra time assessment (PET) – although ignorance of the availability of this service amongst the other race/population groups may have played a role in this finding

The following conditions appeared to be comparatively underdiagnosed in the different race/population groups:

African students –

- Affective disorder

White students –

- V-codes

The following mental disorders produced statistically significant race/population group-specific results:

- Dysthymia (reactive) (PAD)
- Adjustment disorder with academic inhibition (PJA)
- Family problem (PVF)
- Panic disorder (PNP)
- Generalised anxiety disorder (PNG)
- Anxiety (neurotic) disorders diagnostic category (PN–)
- Personality disorder (PPD)
- Alcohol abuse (PSA)
- Extra time assessment (PET)
- Other (PO)
- "Other" disorders diagnostic category

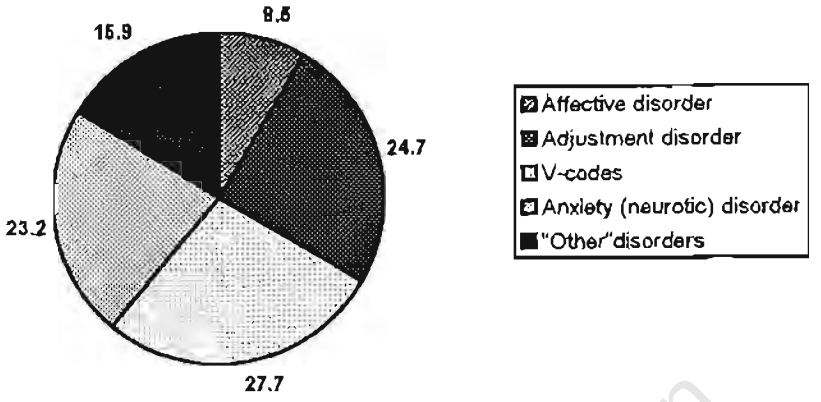
Table 5.16 Diagnoses of African (N=271), Coloured (N=124), Indian (N=36) and White (N=488) students presenting at the UCT-SHS-MHS (1991-1993).

Diagnoses	African students[1]		Coloured students[1]		Indian students[1]		White students[1]		Df	χ^2	p
	n	%	n	%	n	%	n	%			
Affective disorder											
Bipolar affective disorder (PAB)	0	0,0	0	0,0	0	0,0	1	0,2	3	0,9	$0,829^{NS}$
Major depressive disorder (PAM)	11	4,1	4	3,2	1	2,7	25	5,1	3	1,3	$0,725^{NS}$
Dysthymia (reactive) (PAD)	12	4,4	14	11,3	4	10,8	28	5,7	3	8,4	$0,039^{Sig}$
Subtotal	23	8,5	18	14,5	5	14,7	54	11,1	3	3,6	$0,311^{NS}$
Adjustment disorder											
Adjustment disorder with depressed mood (PJD)	23	8,5	13	10,5	1	2,7	66	13,5	3	6,0	$0,110^{NS}$
Adjustment disorder with mixed emotional features (PJM)	33	12,2	22	17,7	9	26,5	83	17,0	3	5,5	$0,138^{NS}$
Adjustment disorder with academic inhibition (PJA)	11	4,1	5	4,0	0	0,0	6	1,2	3	8,4	$0,039^{Sig}$
Subtotal	67	24,7	40	32,3	10	29,4	155	31,8	3	4,7	$0,193^{NS}$
V-codes											
Relationship problem (PVR)	32	11,8	12	9,6	5	14,7	39	8,0	3	3,6	$0,303^{NS}$
Family problem (PVF)	10	3,7	15	12,0	1	2,7	24	4,9	3	13,1	$0,004^{Sig}$
Complicated bereavement (PVB)	12	4,4	2	1,6	0	0,0	12	2,5	3	4,5	$0,211^{NS}$
Pre- and post-termination counselling (for unplanned/unwanted pregnancy) (PVP)	12	4,4	4	3,2	1	2,7	11	2,3	3	2,8	$0,420^{NS}$
Academic problem (PVA)	9	3,3	0	0,0	2	5,9	9	1,8	3	6,5	$0,090^{NS}$
Subtotal	75	27,7	33	26,6	9	26,5	95	19,5	3	7,7	$0,052^{NS}$
Anxiety (neurotic) disorder											
Obsessive-compulsive disorder (PNO)	0	0,0	1	0,8	0	0,0	2	0,4	3	2,0	$0,574^{NS}$
Panic disorder (PNP)	1	0,4	3	2,4	3	8,8	7	1,4	3	13,8	$0,003^{Sig}$
Post-traumatic stress syndrome (disorder) (PNT)	5	1,8	3	2,4	1	2,7	7	1,4	3	0,8	$0,845^{NS}$
Generalised anxiety disorder (PNG)	43	15,9	13	10,5	4	10,8	41	8,4	3	10,0	$0,019^{Sig}$
Examination anxiety (PNE)	12	4,4	3	2,4	4	10,8	18	3,7	3	5,5	$0,139^{NS}$
Phobia/Phobic anxiety (PNF+PF)	1	0,4	0	0,0	0	0,0	3	0,6	3	1,1	$0,778^{NS}$
Hysterical disorder (PNH)	1	0,4	0	0,0	0	0,0	0	0,0	3	2,4	$0,494^{NS}$
Subtotal	63	23,2	23	18,5	12	32,4	78	16,0	3	10,4	$0,016^{Sig}$
"Other" disorders											
Psychosis (PP)	4	1,5	0	0,0	0	0,0	2	0,4	3	4,3	$0,227^{NS}$
Anorexia (PEA)	2	0,7	0	0,0	0	0,0	3	0,6	3	1,1	$0,773^{NS}$
Bulimia (PEB)	1	0,4	2	1,6	0	0,0	17	3,5	3	9,1	$0,028^{Sig}$
Personality disorder (PPD)	1	0,4	3	2,4	0	0,0	12	2,5	3	5,5	$0,142^{NS}$
Alcohol abuse (PSA)	7	2,6	0	0,0	0	0,0	2	0,4	3	10,4	$0,015^{Sig}$
Drug abuse (PSD)	0	0,0	0	0,0	0	0,0	1	0,2	3	0,9	$0,829^{NS}$
Sexual dysfunction (PSX)	6	2,2	1	0,8	1	2,7	2	0,4	3	6,3	$0,099^{NS}$
Gender issues (PG)	1	0,4	3	2,4	0	0,0	7	1,4	3	3,8	$0,281^{NS}$
Extra time assessment (PET)	4	1,5	1	0,8	0	0,0	46	9,4	3	30,1	$0,000^{Sig}$
Other (PO)	17	6,3	0	0,0	0	0,0	14	2,9	3	13,0	$0,005^{Sig}$
Subtotal	43	15,9	10	8,1	1	2,7	106	21,7	3	19,9	$0,000^{Sig}$
Total	271	100,0	124	100,0	37	100,0	538	100,0	-	-	-

Number of missing responses = 27 for patients and 31 for diagnoses.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.

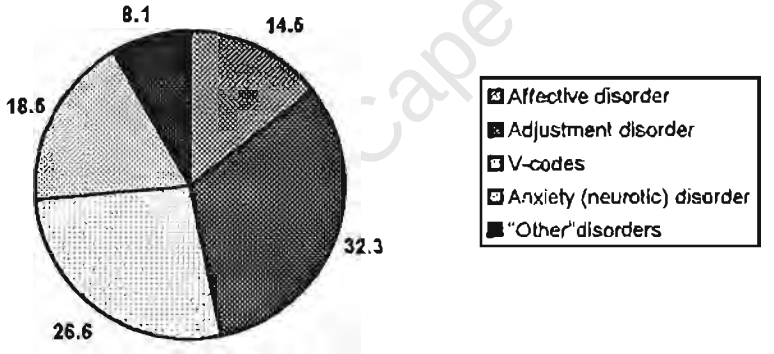
Figure 5.5 Pie diagrams of the distribution of major diagnostic categories (N=5) in students presenting at the UCT-SHS-MHS (1991-1993) stratified by race/population group.

(a) African student attendees



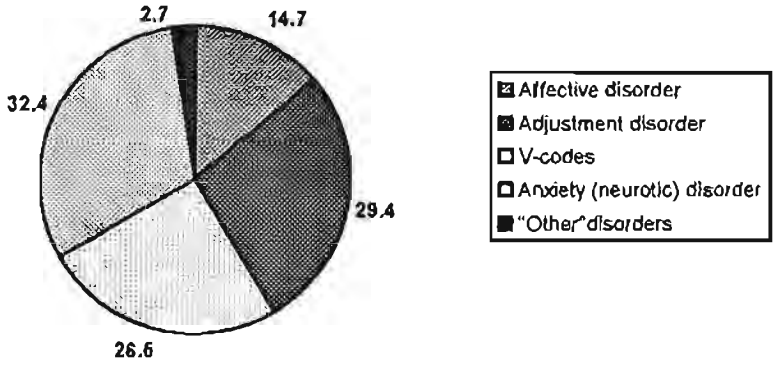
Refer to Table 5.16 for number of patients recording each individual major diagnostic category.

(b) Coloured student attendees



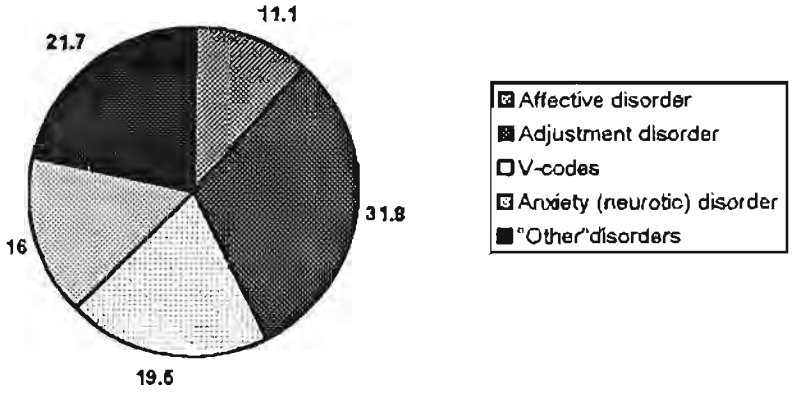
Refer to Table 5.16 for number of patients recording each individual major diagnostic category.

(c) Indian student attendees



Refer to Table 5.16 for number of patients recording each individual major diagnostic category.

(d) White student attendees



Refer to Table 5.16 for number of patients recording each individual major diagnostic category.

(ii) Abridged format

– Patient-specific data

Table 5.17 demonstrates that there was a greater number of White students than Black (African, Coloured and Indian) students (by 11,4 per cent) who attended the UCT-SHS-MHS from 1991 to 1993.

Table 5.17 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) stratified by Black (African, Coloured and Indian) students versus White students.

Race/population group[1]	n	%
Blacks (A, C and I)	428	47,3
Whites	477	52,7
Total	905	100,0

Number of missing responses = 27.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.

– Clinical/diagnostic-specific data

Table 5.18 demonstrates and Figures 5.6(a) and (b) illustrate that 920 individual diagnoses were made for 905 documented patients attending the UCT-SHS-MHS from 1991 to 1993. Thirteen patients (4 Black (African, Coloured and Indian) students and 9 White students) had two co-existing diagnoses while one White patient had three. There was a wide range of diagnoses as all 28 individual diagnoses were used by UCT-SHS-MHS therapists. Adjustment disorder and V-codes were the joint most common major diagnostic categories for Black students while adjustment disorder was the leading category for White students. For Black students adjustment disorder with mixed emotional features (PJM – 64 patients) and generalised anxiety (PNG – 60 patients) predominated while adjustment disorder with mixed emotional features (PJM – 83 patients) and adjustment disorder with depressed mood (PJD – 66 patients) ranked highest for White students. For both Black and White students, reactive dysthymia (PAD), adjustment disorder with mixed emotional features (PJM), relationship problems (PVR) and generalised anxiety disorder (PNG) were the

leading affective disorder, adjustment disorder, V-code and anxiety (neurotic) disorder, respectively. Other (PO) was the main "other" disorder for Black students with bulimia (PEB) for White students. Individual mental disorders compatible with severe psychopathology (e.g. psychosis (PP) and bipolar affective disorder (PAB)) were represented in UCT-SHS-MHS attendees (the former predominantly in Black students and the latter in a solitary White student) although they were not commonly reported.

The following conditions appeared to be more common amongst White students:

- Major depressive disorder (PAM)
- Adjustment disorder with depressed mood (PJD)*
- Adjustment disorder with mixed emotional features (PJM)
- Eating disorders
- Bulimia (PEB)*
- Personality disorder (PPD)
- Extra time assessment (PET)*

*This race/population group-specific result is statistically significant.

The following conditions appeared to affect more Black students:

- Relationship problem (PVR)
- Pre- and post termination counselling for unplanned/unwanted pregnancy (PVP)
- Generalised anxiety disorder (PNG)*
- Alcohol abuse (PSA)
- Sexual dysfunction (PSX)*

*This race/population group-specific result is statistically significant.

It is noteworthy, however, that adjustment disorders were not more common amongst Black students.

A: Major diagnostic categories

Table 5.18 demonstrates that Black students were diagnosed as presenting at the UCT-SHS-MHS with a greater number of V-codes and anxiety (neurotic) disorder than White students (by 23,2 and 25,6 per cent, respectively) – these differences were statistically significant (p=0,006 and 0,010, respectively). On the other hand, White students recorded more affective disorder, adjustment disorder, "other" disorders and total (combined) disorders than Black students (by 17,4; 32,5; 96,3 and 13,0 per cent, respectively) – however, only "other" disorders produced a statistically significant (p=0,000) difference. For Black students, adjustment disorder and V-codes were the joint most common presenting major diagnostic category while adjustment disorder was the most frequently coded major diagnostic category for White students.

B: Individual V-codes

Table 5.18 demonstrates that Black students were diagnosed as presenting at the UCT-SHS-MHS with a greater number of all individual V-codes than White students (by 25,6 per cent for relationship problems; by

8,3 per cent for family problems; by 16,7 per cent for complicated bereavement; by 54,5 per cent for pre- and post-termination counselling for unplanned/unwanted pregnancies; by 22,2 per cent for academic problems and by 23,2 per cent for total (combined) V-codes, respectively) – however, none of these individual V-codes produced a statistically significant difference. For Black (African Coloured and Indian) students, relationship problem was the most common presenting individual V-code as well as the most frequently coded individual V-code for White students.

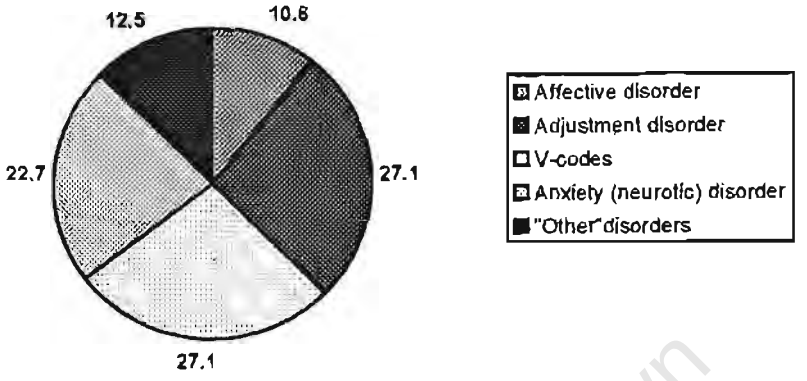
Table 5.18 Diagnoses of Black (African, Coloured and Indian) students (N=432) versus White students (N=488) presenting at the UCT-SHS-MHS (1991-1993).

Diagnoses	Black (A, C, I) students		White students		Unadjusted OR (with 95% CI)	Df	χ^2	p
	n	%	n	%				
Affective disorder								
Bipolar affective disorder (PAB)	0	0,0	1	0,2	0,0 (0,0 - 19,6)	1	0,9	$0,347^{NS}$
Major depressive disorder (PAM)	16	3,7	25	5,1	0,7 (0,4 - 1,4)	1	1,1	$0,298^{NS}$
Dysthymia (reactive) (PAD)	30	6,9	28	5,7	1,2 (0,7 - 2,2)	1	0,6	$0,452^{NS}$
Subtotal	46	10,6	54	11,1	1,0 (0,6 - 1,5)	1	0,0	$0,839^{NS}$
Adjustment disorder								
Adjustment disorder with depressed mood (PJD)	37	8,6	66	13,5	0,6 (0,4 - 0,9)	1	5,7	$0,017^{Sig}$
Adjustment disorder with mixed emotional features (PJM)	64	14,8	83	17,0	0,9 (0,6 - 1,2)	1	0,8	$0,365^{NS}$
Adjustment disorder with academic inhibition (PJA)	16	3,7	6	1,2	3,1 (1,1 - 8,9)	1	6,0	$0,014^{Sig}$
Subtotal	117	27,1	155	31,8	0,8 (0,6 - 1,1)	1	2,4	$0,121^{NS}$
V-codes								
Relationship problem (PVR)	49	11,3	39	8,0	1,5 (0,9 - 2,4)	1	3,0	$0,085^{NS}$
Family problem (PVF)	26	6,0	24	4,9	1,2 (0,7 - 2,3)	1	0,5	$0,462^{NS}$
Complicated bereavement (PVB)	14	3,2	12	2,5	1,3 (0,6 - 3,1)	1	0,5	$0,475^{NS}$
Pre- and post-termination counselling (for unplanned/unwanted pregnancy) (PVP)	17	3,9	11	2,3	1,8 (0,8 - 4,1)	1	2,2	$0,138^{NS}$
Academic problem (PVA)	11	2,5	9	1,8	1,4 (0,5 - 3,7)	1	0,5	$0,466^{NS}$
Subtotal	117	27,1	95	19,5	1,5 (1,1 - 2,1)	1	7,5	$0,006^{Sig}$
[						4	0,6	$0,965^{NS}]^1$
Anxiety (neurotic) disorder								
Obsessive-compulsive disorder (PNO)	1	0,2	2	0,4	0,6 (0,0 - 7,9)	1	0,2	$0,636^{NS}$
Panic disorder (PNP)	7	1,6	7	1,4	1,1 (0,4 - 3,6)	1	0,1	$0,818^{NS}$
Post-traumatic stress syndrome (disorder) (PNT)	9	2,1	7	1,4	1,5 (0,5 - 4,4)	1	0,6	$0,452^{NS}$
Generalised anxiety disorder (PNG)	60	13,9	41	8,4	1,8 (1,1 - 2,7)	1	7,1	$0,008^{Sig}$
Examination anxiety (PNE)	19	4,4	18	3,7	1,2 (0,6 - 2,4)	1	0,3	$0,585^{NS}$
Phobia/Phobic anxiety (PNF+PF)	1	0,2	3	0,6	0,4 (0,0 - 4,0)	1	0,8	$0,378^{NS}$
Hysterical disorder (PNH)	1	0,2	0	0,0	-	1	1,1	$0,288^{NS}$
Subtotal	98	22,7	78	16,0	1,5 (1,1 - 2,2)	1	6,7	$0,010^{Sig}$
"Other" disorders								
Psychosis (PP)	4	0,9	2	0,4	2,3 (0,4 - 17,9)	1	0,9	$0,332^{NS}$
Anorexia (PEA)	2	0,5	3	0,6	0,8 (0,1 - 5,5)	1	0,1	$0,755^{NS}$
Bulimia (PEB)	3	0,7	17	3,5	0,2 (0,0 - 0,7)	1	8,4	$0,004^{Sig}$
Personality disorder (PPD)	4	0,9	12	2,5	0,4 (0,1 - 1,3)	1	3,2	$0,076^{NS}$
Alcohol abuse (PSA)	7	1,6	2	0,4	4,0 (0,8 - 28,0)	1	3,5	$0,063^{NS}$
Drug abuse (PSD)	0	0,0	1	0,2	0,0 (0,0 - 19,6)	1	0,9	$0,347^{NS}$
Sexual dysfunction (PSX)	8	1,9	2	0,4	4,6 (0,9 - 31,4)	1	4,4	$0,035^{Sig}$
Gender issues (PG)	4	0,9	7	1,4	0,6 (0,2 - 2,5)	1	0,5	$0,479^{NS}$
Extra time assessment (PET)	5	1,2	46	9,4	0,1 (0,0 - 0,3)	1	29,9	$0,000^{Sig}$
Other (PO)	17	3,9	14	2,9	1,4 (0,6 - 3,0)	1	0,8	$0,371^{NS}$
Subtotal	54	12,5	106	21,7	0,5 (0,4 - 0,8)	1	13,6	$0,000^{Sig}$
Total	432	100,0	488	100,0	-	4	24,1	$0,000^{Sig\ 2}$

Number of missing responses = unknown.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.

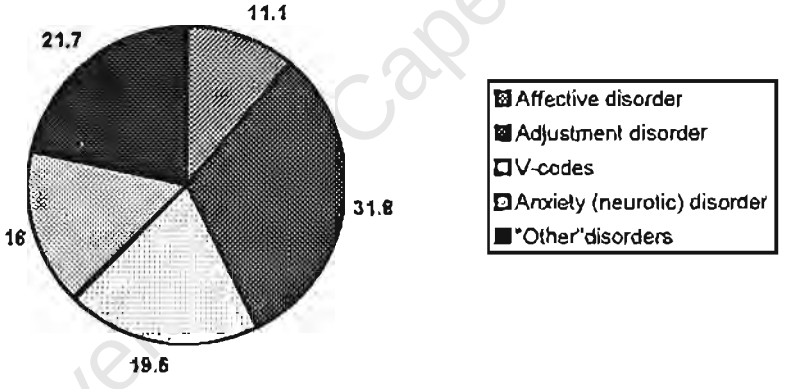
Figure 5.6 Pie diagrams of the distribution of major diagnostic categories (N=5) in students presenting at the UCT-SHS-MHS (1991-1993) stratified by Black (African, Coloured and Indian) students versus White students.

(a) Black (African, Coloured and Indian) student attendees



Refer to Table 5.18 for number of patients recording each individual major diagnostic category.

(b) White student attendees



Refer to Table 5.18 for number of patients recording each individual major diagnostic category.

(b) Objective 2 (patients versus controls) and Objective 3 (patients versus the total student community)

Research Hypothesis IIa of the UCT-SHS study is as follows:

> *Black students are more likely to present with mental disorders at the UCT-SHS-MHS than White students.*

In these objectives Research Hypothesis IIa is either confirmed or rejected according to the unadjusted odds ratio or χ^2 test (p-value) for UCT-SHS-MHS attendees (patients) versus UCT-SHS medical attendees (controls) [Objective 2] or to additional usage/utilisation (prevalence) rates per 1 000 students and utilisation (prevalence) ratios for either clinical diagnoses or patients versus registered UCT students (the total student community) [Objective 3].

(i) Non-abridged format ("Conventional" format)

– Patient-specific data

Table 5.19 demonstrates that only Coloured students are statistically (p=0,000) more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS which corresponds to a likelihood ratio ($\%_1$:$\%_2$) of 1,654. In fact, these students are 26,6 per cent overrepresented (with a standardised residual of +3,4) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0. Conversely, only African students are statistically (p=0,025) less likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS which corresponds to a likelihood ratio ($\%_1$:$\%_2$) of 0,874. In fact, these students are 9,6 per cent underrepresented (with a standardised residual of 1,5) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0. In addition, the race population group-specific variable with its four subcategories did produce a statistically significant (p=0,000) result.

However, Table 5.20 demonstrates that only African students are statistically (p=0,000) more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than their representation of the student community would suggest which corresponds to a likelihood ratio ($\%_1$:$\%_3$) of 2,048. In fact, these students are 51,2 per cent overrepresented (with a standardised residual of +12,1) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0. Conversely, only White students are statistically (p=0,000) less likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than their representation of the student community would suggest which corresponds to a likelihood ratio ($\%_1$:$\%_3$) of 0,772. In fact, these students are 29,4 per cent underrepresented (with a standardised residual of 5,7) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0. In addition the race/population group-specific variable with its four subcategories did produce a statistically significant (p=0,000) result.

Table 5.19 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of controls (N=1 924) stratified by race/population group.

Race/population group[1]	n_1	$\%_1$	n_2	$\%_2$	Unadjusted OR (with 95% CI)	Df	χ^2	p
Africans	271	29,9	656	34,2	0,8 (0,7 - 1,0)	1	5,0	$0,025^{Sig}$
Coloureds	121	13,4	156	8,1	1,7 (1,4 - 2,5)	1	19,1	$0,000^{Sig}$
Indians	36	4,0	67	3,5	1,1 (0,8 - 1,7)	1	0,4	$0,520^{NS}$
Whites	477	52,7	1 040	54,2	1,1 (0,9 - 1,2)	1	0,5	$0,459^{NS}$
Total	905	100,0	1 919	100,0	-	3	21,2	$0,000^{Sig}$

Number of missing responses = 27 for patients and 5 for controls.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
n_1 and $\%_1$ refer to patients.
n_2 and $\%_2$ refer to controls.

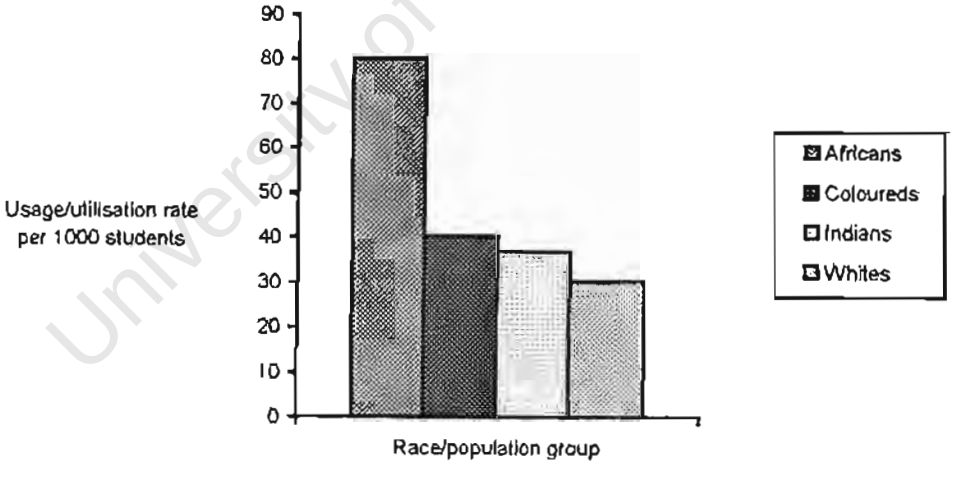
Table 5.20 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of total student community (N=23 158) stratified by race/population group.

Race/population group[1]	n_1	$\%_1$	n_3	$\%_3$	Unadjusted OR (with 95% CI)	Df	χ^2	p
Africans	271	29,9	3 382	14,6	2,6 (2,3 - 3,0)	1	177,7	0,000[Sig]
Coloureds	121	13,4	3 000	13,0	1,0 (0,8 - 1,2)	1	0,1	0,704[NS]
Indians	36	4,0	977	4,2	0,9 (0,7 - 1,3)	1	0,1	0,713[NS]
Whites	477	52,7	15 798	68,2	0,5 (0,4 - 0,6)	1	104,6	0,000[Sig]
Total	905	100,0	23 157	100,0	-	3	185,2	0,000[Sig]

Number of missing responses = 27 for patients and 1 for the total student community.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
n_1 and $\%_1$ refer to patients.
n_3 and $\%_3$ refer to the total student community.

Figure 5.7 illustrates and Table 5.21 demonstrates that African students have the highest usage/utilisation rate and, consequently, utilisation ratio followed by Coloured students, Indian students and White students respectively. This finding confirms the existence of a gradient between these race/population groups.

Figure 5.7 Usage/utilisation rate per 1 000 students in students presenting at the UCT-SHS-MHS (1991-1993) stratified by race/population group.



Refer to Table 5.21 for values of usage/utilisation rates.

Table 5.21 Usage/utilisation rate per 1 000 students and utilisation ratio in students presenting at the UCT-SHS-MHS (1991-1993) stratified by race/population group.

Race/population group[1]	Usage/utilisation rate per 1 000 students	Deviation from mean usage/utilisation rate per 1 000 students	Utilisation ratio
Africans	80,1	+41,0	2,05
Coloureds	40,3	+1,2	1,03
Indians	36,8	-2,3	0,94
Whites	30,2	-8,9	0,77
Mean	39,1	-	1,00

[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.

– Clinical/diagnostic-specific data

A: Major diagnostic categories

Table 5.22 demonstrates that, for affective disorder, adjustment disorder, V-codes and total (combined) disorders, African students have the highest usage/utilisation (prevalence) rate and, consequently, utilisation (prevalence) ratio followed by Coloured, Indian and White students. The two exceptions are anxiety (neurotic) disorder where Indian students have a higher usage/utilisation (prevalence) rate and utilisation (prevalence) ratio than Coloured students and "other" disorders where White students have a higher usage/utilisation (prevalence) rate and utilisation (prevalence) ratio than both Indian and Coloured students.

Table 5.22 Usage/utilisation (prevalence) rate per 1 000 students and utilisation (prevalence) ratio for major diagnostic categories in students presenting at the UCT-SHS-MHS (1991-1993) stratified by race/population group.

(a) Affective disorder			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Africans	6,8	+2,5	1,58
Coloureds	6,0	+1,7	1,40
Indians	5,1	+0,8	1,19
Whites	3,4	-0,9	0,79
Mean	4,3	-	1,00
(b) Adjustment disorder			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Africans	19,8	+8,1	1,69
Coloureds	13,3	+1,6	1,14
Indians	10,2	-1,5	0,87
Whites	9,8	-1,9	0,84
Mean	11,7	-	1,00
(c) V-codes			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Africans	22,2	+13,0	2,41
Coloureds	11,0	+1,8	1,20
Indians	9,2	+0,0	1,00
Whites	6,0	-3,2	0,65
Mean	9,2	-	1,00

(d) Anxiety (neurotic) disorder			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Africans	18,6	+11,0	2,45
Coloureds	7,7	+0,1	1,01
Indians	12,3	+4,7	1,62
Whites	4,9	-2,7	0,64
Mean	7,6	-	1,00
(e) "Other" disorders			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Africans	12,7	+5,8	1,84
Coloureds	3,3	-3,6	0,48
Indians	1,0	-5,9	0,14
Whites	6,7	-0,2	0,97
Mean	6,9	-	1,00
(f) Total (combined) disorders			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Africans	80,1	+40,4	2,02
Coloureds	41,3	+1,6	1,04
Indians	37,9	-1,8	0,95
Whites	30,9	-8,8	0,78
Mean	39,7	-	1,00

Number of missing responses = 27 for patients and 31 for diagnoses.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.

B: Individual V-codes

Table 5.23 demonstrates that, for relationship problem, complicated bereavement, pre- and post-termination counselling for unplanned/unwanted pregnancy, academic problem and total (combined) V-codes, African students have the highest usage/utilisation (prevalence) rate and, consequently, utilisation (prevalence) ratio followed by Coloured, Indian and White students for pre- and post-termination counselling for unplanned/unwanted pregnancy and total (combined) V-codes. Indian students were ranked second for relationship problem and academic problem while White students were placed next for complicated bereavement. The only exception is family problem where Coloured students have the highest usage/utilisation (prevalence) rate and utilisation (prevalence) ratio followed by African White and Indian students, respectively.

Table 5.23 Usage/utilisation (prevalence) rate per 1 000 students and utilisation (prevalence) ratio for individual V-codes in students presenting at the UCT-SHS-MHS (1991-1993) stratified by race/population group.

(a) Relationship problem			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Africans	9,5	+5,7	2,50
Coloureds	4,0	+0,2	1,05
Indians	5,1	+1,3	1,34
Whites	2,5	-1,3	0,66
Mean	3,8	-	1,00

(b) Family problem			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Africans	3,0	+1,4	1,88
Coloureds	5,0	+3,4	3,13
Indians	1,0	-0,6	0,63
Whites	1,5	-0,1	0,94
Mean	1,6	-	1,00
(c) Complicated bereavement			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Africans	3,5	+2,4	3,18
Coloureds	0,7	-0,4	0,64
Indians	0,0	-1,1	0,00
Whites	0,8	-0,3	0,73
Mean	1,1	-	1,00
(d) Pre- and post-termination counselling for unplanned/unwanted pregnancy			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Africans	3,5	+2,3	2,92
Coloureds	1,3	+0,1	1,08
Indians	1,0	-0,2	0,83
Whites	0,7	-0,5	0,58
Mean	1,2	-	1,00
(e) Academic problem			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Africans	2,7	+1,8	3,00
Coloureds	0,0	-0,9	0,00
Indians	2,0	+1,1	2,22
Whites	0,6	-0,3	0,67
Mean	0,9	-	1,00
(f) Total (combined) V-codes			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Africans	22,2	+13,0	2,41
Coloureds	11,0	+1,8	1,20
Indians	9,2	+0,0	1,00
Whites	6,0	-3,2	0,65
Mean	9,2	-	1,00

Number of missing responses = unknown.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.

(ii) Non-abridged format ("Matrix" format)

– Overview

The layout adopted has been to compare the individual subcategory to the remaining subcategories (by means of contingency (2x2) tables for data fulfilling Objectives 2 and 3) – the initial subheading in Tables 5.24 and 5.25 will detail African students being tested for this variable-versus Coloured, Indian and White students, respectively, while the second subheading in Tables 5.24 and 5.25 will detail Coloured students versus Indian and White students, respectively, while the final subheading in Tables 5.24 and 5.25 will detail Indian students versus White students. This standardised format will prevent the repetition of reverse comparisons.

– Results

Table 5.24 demonstrates that African students appear only minimally less likely than White students to present at the UCT-SHS-MHS than attend the UCT-SHS with purely medical complaints as reflected by a statistically insignificant OR for patients versus controls. In fact, African students are 2,7 per cent underrepresented (with a standardised residual of 0,6) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0. (These OR values, in turn, for African versus White students are somewhat higher than those recorded for African versus Indian students (by 0,1) which, in turn, are somewhat higher than those recorded for African versus Coloured students (by a further 0,3) thereby suggesting the existence of a positive gradient between Coloured, Indian and White students (relative to African students) in making use of university mental health services). However, the results in Table 5.25 suggest that African students are more likely than White students to present at the UCT-SHS-MHS as reflected by a statistically significant (p=0,000) positive OR for patients versus total student community. In fact, African students are 22,6 per cent overrepresented (with a standardised residual of +5,6) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0. (These OR values for African versus White students are minimally higher than those recorded for African versus Indian students (by less than 0,1), which, in turn, are somewhat higher than those recorded for African versus Coloured students (by a further 0,5), thereby further suggesting the existence of a positive gradient between Coloured, Indian and White students (relative to African students) relative to UCT-SHS-MHS attendance).

Table 5.24 demonstrates that Coloured students are more likely than White students to present at the UCT-SHS-MHS than attend the UCT-SHS with purely medical complaints as reflected by a statistically significant (p=0,000) positive OR for patients versus controls. In fact, Coloured students are 5,7 per cent overrepresented (with a standardised residual of +1,3) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0. (These OR values, in turn, for Coloured versus White students are somewhat higher than those recorded for Coloured versus Indian students (by 0,3), thereby suggesting the existence of a negative gradient between Indian and White students (relative to Coloured students) in making use of university mental health services). In addition, the results in Table 5.25 suggest that Coloured students are more likely than White students to present at the UCT-SHS-MHS as reflected by a statistically significant (p=0,004) positive OR for patients versus total student community. In fact, Coloured students are 5,1 per cent overrepresented (with a standardised residual of +1,1) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0. (These OR values for Coloured versus White students are somewhat higher than those recorded for Coloured versus Indian students (by 0,3), thereby suggesting the existence of a positive gradient between Indian and White students (relative to Coloured students) relative to UCT-SHS-MHS attendance).

Table 5.24 demonstrates that Indian students are also slightly more likely than White students to present at the UCT-SHS-MHS than attend the UCT-SHS with purely medical complaints as reflected by a statistically

insignificant OR for patients versus controls. In fact, Indian students are 0,7 per cent overrepresented (with a standardised residual of +0,2) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0. In addition, the results in Table 5.25 suggest that Indian students are only minimally more likely than White students to present at the UCT-SHS-MHS with psychological or psychiatric complaints as reflected by a statistically insignificant OR for patients versus total student community. In fact, these students are 1,3 per cent overrepresented (with a standardised residual of +0,3) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0.

Table 5.24 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of controls (N=1 924) stratified by race/population group according to "matrix" format.

Race/population group[1]	n_1	$\%_1$	n_2	$\%_2$	Unadjusted OR (with 95% CI)	Df	χ^2	p
Africans								
Coloureds	121	30,9	156	19,.2	0,5 (0,4 - 0,7)	1	20,3	$0,000^{Sig}$
Indians	36	11,7	67	9,3	0,8 (0,5 - 1,3)	1	1,4	$0,229^{NS}$
Whites	477	63,8	1 040	61,3	0,9 (0,8 - 1,1)	1	1,3	$0,250^{NS}$
Coloureds								
Indians	36	22,9	67	30,0	1,4 (0,9 - 2,5)	1	2,4	$0,125^{NS}$
Whites	477	79,8	1 040	87,0	1,7 (1,3 - 2,0)	1	15,8	$0,000^{Sig}$
Indians								
Whites	477	93,0	1 040	93,9	1,3 (0,8 - 1,7)	1	5,5	$0,459^{NS}$

Number of missing responses =27 for patients and 5 for controls.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
n_1 and $\%_1$ refer to patients.
n_2 and $\%_2$ refer to controls.

Table 5.25 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of the total student community (N=23 158) stratified by race/population group according to "matrix" format.

Race/population group[1]	n_1	$\%_1$	n_3	$\%_3$	Unadjusted OR (with 95% CI)	Df	χ^2	p
Africans								
Coloureds	121	30,9	3 000	47,0	2,0 (1,7 - 2,5)	1	43,7	$0,000^{Sig}$
Indians	36	11,7	977	22,4	2,5 (1,7 - 3,3)	1	21,7	$0,000^{Sig}$
Whites	477	63,8	15 798	82,4	2,5 (1,7 - 3,3)	1	185,3	$0,000^{Sig}$
Coloureds								
Indians	36	22,9	977	24,6	1,1 (0,8 - 1,7)	1	0,2	$0,627^{NS}$
Whites	477	79,8	15 798	84,0	1,4 (1,1 - 1,7)	1	8,4	$0,004^{Sig}$
Indians								
Whites	477	93,0	15 798	94,2	1,3 (0,9 - 1,7)	1	1,4	$0,241^{NS}$

Number of missing responses =27 for patients and 1 for total student community.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
n_1 and $\%_1$ refer to patients.
n_3 and $\%_3$ refer to the total student community.

(iii) Abridged format ("Conventional" format)

– Patient-specific data

Table 5.26 demonstrates that Black (African, Coloured and Indian) students appear only minimally less likely than White students to present at the UCT-SHS-MHS than attend the UCT-SHS with purely medical complaints as reflected by a statistically insignificant OR for patients versus controls which corresponds to a likelihood ratio ($\%_1$:$\%_2$) of 1,033. (This OR value, in turn, for Black versus White students (unadjusted OR of 1,1) is somewhat higher than that previously recorded for African versus non-African (Coloured, Indian and White) students (unadjusted OR of 0,8), thereby suggesting the existence of a negative gradient between the extended Black format and the contracted African format in making use of university mental health services. This finding is compatible with results previously outlined in the "matrix" format.) In fact, Black students are 2,2 per cent overrepresented (with a standardised residual of +0,4) and White students are 1,9 per cent underrepresented (with a standardised residual of 0,4) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0.

However, the results in Table 5.27 suggest that Black students are more likely than White students to present at the UCT-SHS-MHS as reflected by a statistically significant (p=0,000) positive OR for patients versus total student community which corresponds to a likelihood ratio ($\%_1$:$\%_3$) of 1,487. (This OR value for Black versus White students (unadjusted OR of 2,0) is somewhat lower than that previously recorded for African versus non-African (Coloured, Indian and White) students (unadjusted OR of 2,6), thereby suggesting the existence of a positive gradient between the extended Black format and the contracted African format relative to UCT-SHS-MHS attendance. This finding is compatible with results previously outlined in the "matrix" format). Here Black students are 46,1 per cent overrepresented (with a standardised residual of +7,9) and White students are 22,1 per cent underrepresented (with a standardised residual of 5,4) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0. These findings therefore confirm Research Hypothesis IIa for Objectives 2 and 3 of the UCT-SHS study.

Table 5.26 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of controls (N=1 924) stratified by Black (African, Coloured and Indian) students versus White students.

(a) Unadjusted ORs and $\chi 2$ tests

Race/population group[1]	n_1	$\%_1$	n_2	$\%_2$	Unadjusted OR (with 95% CI)	Df	χ^2	p
Blacks (A, C, I)	428	47,3	879	45,8	1,1 (0,9 - 1,2)	1	0,5	0,459[NS]
Whites	477	52,7	1 040	54,2	-	-	-	-
Total	905	100,0	1 919	100,0	-	-	-	-

(b) Expected frequencies

Race/population group[1]	Observed frequency$_1$	Expected frequency$_1$	Difference between observed and expected frequency$_1$	Observed frequency$_2$	Expected frequency$_2$	Difference between observed and expected frequency$_2$
Blacks (A, C, I)	428	418,9	+9,1 (+2,2%)	879	888,1	-9,1 (-1,0%)
Whites	477	486,1	-9,1 (-1,9%)	1 040	1 030,9	+9,1 (+0,9%)
Total	905	905,0	-	1 919	1 919,0	-

Number of missing responses = 27 for patients and 5 for controls.

[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
n_1 and $\%_1$ refer to patients.
Observed frequency$_1$ and expected frequency$_1$ refer to patients.
n_2 and $\%_2$ refer to controls.
Observed frequency$_2$ and expected frequency$_2$ refer to controls.

Table 5.27 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of the total student community (N=23 158) stratified by Black (African, Coloured and Indian) students versus White students.

(a) Unadjusted ORs and χ2 tests

Race/population group[1]	n_1	$\%_1$	n_3	$\%_3$	Unadjusted OR (with 95% CI)	Df	χ^2	p
Blacks (A, C, I)	428	47,3	7 359	31,8	2,0 (1,7 - 2,3)	1	104,6	0,000[sig]
Whites	477	52,7	15 798	68,2	-	-	-	-
Total	905	100,0	23 157	100,0	-	-	-	-

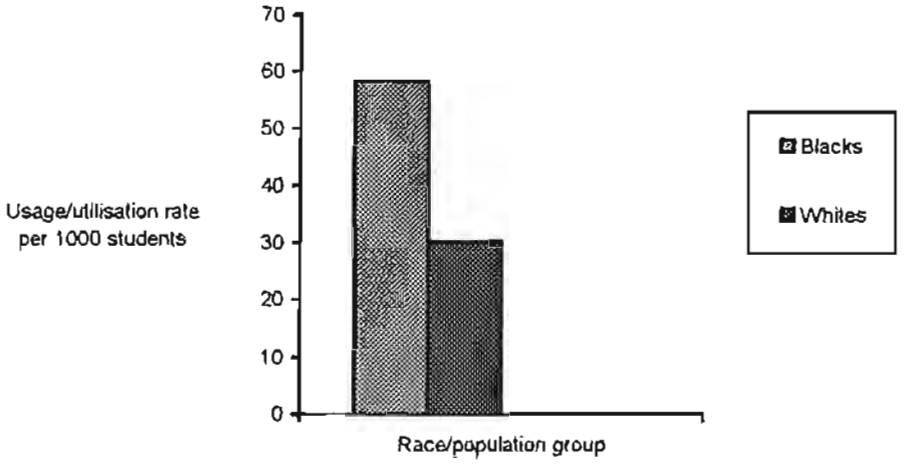
(b) Expected frequencies

Race/population group[1]	Observed frequency$_1$	Expected frequency$_1$	Difference between observed and expected frequency$_1$	Observed frequency$_3$	Expected frequency$_3$	Difference between observed and expected frequency$_3$
Blacks (A, C, I)	428	292,9	+135,1 (+46,1%)	7 359	7 494,1	-135,1 (-1,8%)
Whites	477	612,1	-135,1 (-22,1%)	15 798	15 662,9	+135,1 (+0,9%)
Total	905	905,0	-	23 157	23 157,0	-

Number of missing responses = 27 for patients and 1 for total student community.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
n_1 and $\%_1$ refer to patients.
Observed frequency$_1$ and expected frequency$_1$ refer to patients.
n_3 and $\%_3$ refer to the total student community.
Observed frequency$_3$ and expected frequency$_3$ refer to the total student community.

Figure 5.8 illustrates and Table 5.28 demonstrates that Black (African, Coloured and Indian) students have a considerably higher usage/utilisation rate and, consequently, utilisation ratio than White students (by 92,7 and 93,5 per cent, respectively). This patient-specific finding, therefore, is compatible with Research Hypothesis IIa of the UCT-SHS study.

Figure 5.8 Usage/utilisation rate per 1 000 students in students presenting at the UCT-SHS-MHS (1991-1993) stratified by Black (African, Coloured and Indian) students versus White students.



Refer to Table 5.28 for values of usage/utilisation rates.

Table 5.28 Usage/utilisation rate per 1 000 students and utilisation ratio in students presenting at the UCT-SHS-MHS (1991-1993) stratified by Black (African, Coloured and Indian) students versus White students.

Race/population group[1]	Usage/utilisation rate per 1 000 students	Deviation from mean usage/utilisation rate per 1 000 students	Utilisation ratio
Blacks (African, Coloured and Indian) students	58,2	+19,1	1,49
White students	30,2	-8,9	0,77
Mean	39,1	-	1,00

[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.

– Clinical/diagnostic-specific data

A: Major diagnostic categories

Table 5.29 demonstrates that, for all major diagnostic categories, Black (African, Coloured and Indian) students have a generally considerably higher usage/utilisation (prevalence) rate and, consequently, utilisation (prevalence) ratio than White students (by 85,3 and 86,1 per cent for affective disorder, by 62,2 and 63,1 per cent for adjustment disorder, by 165,0 and 166,2 per cent for V-codes, by 171,4 and 173,4 per cent for anxiety (neurotic) disorder, by 9,0 and 9,3 per cent for "other" disorders and by 90,0 and 89,7 per cent for total (combined) disorders). These clinical findings therefore are consistent with Research Hypothesis IIa for all major diagnostic categories employed in the UCT-SHS study.

Table 5.29 Usage/utilisation (prevalence) rate per 1 000 students and utilisation (prevalence) ratio for major diagnostic categories in students presenting at the UCT-SHS-MHS (1991-1993) stratified by Black (African, Coloured and Indian) students versus White students.

(a) Affective disorder			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Blacks (A, C, I)	6,3	+2,0	1,47
Whites	3,4	-0,9	0,79
Mean	4,3	-	1,00
(b) Adjustment disorder			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Blacks (A, C, I)	15,9	+4,3	1,37
Whites	9,8	-1,8	0,84
Mean	11,6	-	1,00
(c) V-codes			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Blacks (A, C, I)	15,9	+6,7	1,73
Whites	6,0	-3,2	0,65
Mean	9,2	-	1,00

(d) Anxiety (neurotic) disorder			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Blacks (A, C, I)	13,3	+5,7	1,75
Whites	4,9	-2,7	0,64
Mean	7,6	-	1,00
(e) "Other" disorders			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Blacks (A, C, I)	7,3	+0,4	1,06
Whites	6,7	-0,2	0,97
Mean	6,9	-	1,00
(f) Total (combined) disorders			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Blacks (A, C, I)	58,7	+19,0	1,48
Whites	30,9	-8,8	0,78
Mean	39,7	-	1,00

Number of missing responses = 27 for patients and 31 for diagnoses.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.

B: Individual V-codes

Table 5.30 demonstrates that for all individual V-codes, Black (African, Coloured and Indian) students have a generally considerably higher usage/utilisation (prevalence) rate and, consequently, utilisation (prevalence) ratio than White students (by 168,0 and 166,7 per cent for relationship problem, by 133,1 and 133,0 per cent for family problem, by 137,5 and 137,0 per cent for complicated bereavement, by 228,6 and 231,0 per cent for pre- and post-termination counselling for unplanned/unwanted pregnancy, by 150,0 and 149,3 per cent for academic problem and by 165,0 and 166,2 per cent for total (combined) V-codes. These clinical findings therefore are consistent with Research Hypothesis IIa for all individual V-codes employed in the UCT-SHS study.

Table 5.30 Usage/utilisation (prevalence) rate per 1 000 students and utilisation (prevalence) ratio for individual V-codes in students presenting at the UCT-SHS-MHS (1991-1993) stratified by Black (African, Coloured and Indian) students versus White students.

(a) Relationship problem			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Blacks (A, C, I)	6,7	+2,9	1,76
Whites	2,5	-1,3	0,66
Mean	3,8	-	1,00
(b) Family problem			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Blacks (A, C, I)	3,5	+1,9	2,19
Whites	1,5	-0,1	0,94
Mean	1,6	-	1,00

(c) Complicated bereavement			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Blacks (A, C, I)	1,9	+0,8	1,73
Whites	0,8	-0,3	0,73
Mean	1,1	-	1,00
(d) Pre- and post-termination counselling for unplanned/unwanted pregnancy			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Blacks (A, C, I)	2,3	+1,1	1,92
Whites	0,7	-0,5	0,58
Mean	1,2	-	1,00
(e) Academic problem			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Blacks (A, C, I)	1,5	+0,6	1,67
Whites	0,6	-0,3	0,67
Mean	0,9	-	1,00
(f) Total (combined) V-codes			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Blacks (A, C, I)	15,9	+6,7	1,73
Whites	6,0	-3,2	0,65
Mean	9,2	-	1,00

Number of missing responses = 27 for patients and 31 for diagnoses.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.

(c) Objective 4 (number of consultations)

Research Hypothesis IIb of the UCT-SHS study is as follows:

> *Black students are likely to require more consultations for mental disorders at the UCT-SHS-MHS than White students.*

In this objective Research Hypothesis IIb is either confirmed or rejected according to the mean number of consultations for UCT-SHS-MHS attendees (patients).

(i) Non-abridged format

Table 5.31 demonstrates that 3 441 individual consultations were made by 905 documented patients attending the UCT-SHS-MHS from 1991 to 1993 – a mean of 3,8 consultations per patient with a range of 1 to 29 consultations. Coloured students were responsible for the highest mean number of consultations per student followed by White, African and Indian students. White students, on the other hand, were responsible for the highest total number of consultations followed by African, Coloured and Indian students. Table 5.32 demonstrates that race/population group did not produce a statistically significant (p=0,061) result in the mean number of consultations required by the student.

Table 5.31 Frequency, percentages, mean number and range of consultations (N=3 441) in students presenting at the UCT-SHS-MHS (1991-1993) stratified by race/population group.

Race/population group[1]	n	%	No. of cons		Range
			mean	SD	
Africans	917	26,6	3,4	3,5	1 to 29 consultations
Coloureds	503	14,6	4,2	4,1	1 to 26 consultations
Indians	120	3,5	3,3	2,7	1 to 10 consultations
Whites	1 901	55,2	4,0	3,3	1 to 23 consultations
Total	3 441	100,0	3,8	3,5	1 to 29 consultations

Number of missing responses = 27 for patients.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.

Table 5.32 ANOVA summary table for the mean number of consultations in students presenting at the UCT-SHS-MHS (1991-1993) by race/population group.

Race/population group[1]	Df	Sum of squares	Mean square	F-ratio	Prob > F
Regression model	3	89,5	29,8	2,47	$0,061^{NS}$
Error	902	10 893,6	12,1		
Corrected total	905	10 983,1			

$R^2 = 0,008$
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.

(ii) Abridged format

Table 5.33 demonstrates that the mean number of consultations per student and the total number of consultations is higher for White students than Black (African, Coloured and Indian) students (by 11,1 and 23,4 per cent, respectively) who attend the UCT-SHS-MHS from 1991 to 1993. As the ANOVA previously appearing in the non-abridged format for race/population group (Table 5.32) produced a non-significant (Df = 3; Prob >F = 0,061) result, no t-test has been performed (invalid procedure) for this particular format of the race/population group-specific variable. This finding therefore rejects Research Hypothesis IIb for Objective 4 of the UCT-SHS study.

Table 5.33 Frequency, percentages, mean number and range of consultations (N=3 441) in students presenting at the UCT-SHS-MHS (1991-1993) stratified by Black (African, Coloured and Indian) students versus White students.

Race/population group[1]	n	%	No. of cons		Range
			mean	SD	
Blacks (A, C and I)	1 540	44,8	3,6	3,1	1 to 29 consultations
Whites	1 901	55,2	4,0	3,3	1 to 23 consultations
Total/Ho	3 441	100,0	3,8	3,5	1 to 29 consultations

Number of missing responses = 27 for patients.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.

5.1.2.3 Race/population group and gender

(a) Objective 1 (attendees) – Descriptive data

(i) Non-abridged format

Table 5.34 demonstrates that White female students were responsible for the greatest number of attendees at the UCT-SHS-MHS from 1991 to 1993 followed by White male, African male, African female and Coloured female students.

Table 5.34 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) stratified by race/population group and gender.

Race/population group[1] and gender	n	%
African males	149	16,5
African females	122	13,5
Coloured males	36	4,0
Coloured females	85	9,4
Indian males	15	1,7
Indian females	21	2,3
White males	177	19,6
White females	300	33,1
Total	905	100,0

Number of missing responses = 27.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.

(ii) Abridged format

– Patient-specific data

A: Gender stratification

– Male student attendees

Table 5.35 demonstrates that there was a greater number of Black (African, Coloured and Indian) male students than White male students (by 13,0 per cent) who attended the UCT-SHS-MHS from 1991 to 1993.

– Female student attendees

Table 5.35 demonstrates that there was a greater number of White female students than Black female students (by 31,6 per cent) who attended the UCT-SHS-MHS from 1991 to 1993.

B: Race/population group stratification

– Black (African, Coloured and Indian) student attendees

Table 5.35 demonstrates that there was a greater number of Black female students than Black male students (by 14,0 per cent) who attended the UCT-SHS-MHS from 1991 to 1993.

– White student attendees

Table 5.35 demonstrates that there was a greater number of White female students than White male students (by 69,5 per cent) who attended the UCT-SHS-MHS from 1991 to 1993.

Table 5.35 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) stratified by gender and Black (African, Coloured and Indian) students versus White students.

Race/population group[1] and gender	n	%
(a) Gender stratification		
Males		
Blacks (A, C, I)	200	53,1
Whites	177	46,9
Subtotal	377	100,0
Females		
Blacks (A, C, I)	228	43,2
Whites	300	56,8
Subtotal	528	100,0
(b) Race/population group[1] stratification		
Blacks (A, C, I)		
Males	200	46,7
Females	228	53,3
Subtotal	428	100,0
Whites		
Males	177	37,1
Females	300	62,9
Subtotal	477	100,0

Number of missing responses = 27.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.

– Clinical/diagnostic-specific data

A: Major diagnostic categories

– Male student attendees

Table 5.36 demonstrates that Black (African, Coloured and Indian) male students were diagnosed as presenting at the UCT-SHS-MHS with a greater number of adjustment disorders, V-codes, anxiety (neurotic) disorders and total (combined) disorders than White male students (by 6,3; 24,1; 83,9 and 12,2 per cent, respectively) – however, anxiety (neurotic) disorder produced a statistically significant (p=0,011) difference. On the other hand, White male students recorded more affective disorders and "other" disorders than Black

male students (by 5,9 and 31,7 per cent, respectively) – however, only "other" disorders produced a statistically significant (p=0,029) difference. For Black male students, anxiety (neurotic) disorder was the most common presenting major diagnostic category while "other" disorders was the most frequently coded major diagnostic category for White male students. Only anxiety (neurotic) disorder produced a statistically significant (p=0,011) result in favour of Black male students while only "other" disorders produced a statistically significant (p=0,029) result in favour of White male students.

Table 5.36 Major diagnostic categories of Black (African, Coloured and Indian) male students (N=200) versus White male students (N=177) presenting at the UCT-SHS-MHS (1991-1993).

Major diagnostic category	Black (A, C, I) students[1]		White students[1]		Unadjusted OR (with 95% CI)	Df	χ^2	p
	n	%	n	%				
Affective disorder	17	8,4	17	8,4	0,8 (0,4 - 1,8)	1	0,3	$0,592^{NS}$
Adjustment disorder	51	25,2	51	25,2	0,9 (0,6 - 1,5)	1	0,1	$0,752^{NS}$
V-codes	36	17,8	36	17,8	1,1 (0,6 - 2,0)	1	0,2	$0,657^{NS}$
Anxiety (neurotic) disorder	57	28,2	57	28,2	1,9 (1,1 - 3,2)	1	6,5	$0,011^{Sig}$
"Other" disorders	41	20,3	41	20,3	0,6 (0,4 - 1,0)	1	4,8	$0,029^{Sig}$
Total	202	100,0	202	100,0	-	4	9,1	$0,059^{NS}$

Number of missing responses = unknown.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.

– Female student attendees

Table 5.37 demonstrates that Black (African, Coloured and Indian) female students were diagnosed as presenting at the UCT-SHS-MHS with a greater number of V-codes than White female students (by 22,7 per cent) – this difference was statistically significant (p=0,000). On the other hand, White female students recorded more affective disorders, adjustment disorders, anxiety (neurotic) disorder, "other" disorders and total (combined) disorders than Black female students (by 24,1; 62,1; 14,6; 300,0 and 33,9 per cent, respectively) – however, only "other" disorders and total (combined) disorders produced statistically significant (p=0,000 each) differences. For Black female students, V-codes was the most common presenting major diagnostic category while adjustment disorder was the most frequently coded major diagnostic category for White female students. Only V-codes produced a statistically significant (p=0,000) result in favour of Black female students while only "other" disorders produced a statistically significant (p=0,000) result in favour of White female students.

Table 5.37 Major diagnostic categories of Black (African, Coloured and Indian) female students (N=228) versus White female students (N=300) presenting at the UCT-SHS-MHS (1991-1993).

Major diagnostic category	Black (A, C, I) students[1]		White students[1]		Unadjusted OR (with 95% CI)	Df	χ^2	p
	n	%	n	%				
Affective disorder	29	12,6	36	11,7	1,1 (0,6 - 1,9)	1	0,1	$0,746^{NS}$
Adjustment disorder	66	28,7	107	34,7	0,8 (0,5 - 1,1)	1	2,2	$0,138^{NS}$
V-codes	81	35,2	66	21,4	2,0 (1,3 - 3,0)	1	12,6	$0,000^{Sig}$
Anxiety (neurotic) disorder	41	17,8	47	15,3	1,2 (0,7 - 2,0)	1	0,6	$0,426^{NS}$
"Other" disorders	13	5,7	52	16,9	0,3 (0,2 - 0,6)	1	15,6	$0,000^{Sig}$
Total	230	100,0	308	100,0	-	4	25,0	$0,000^{Sig}$

Number of missing responses = unknown.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.

– Black (African, Coloured and Indian) student attendees

Table 5.38 demonstrates that Black male students were diagnosed as presenting at the UCT-SHS-MHS with a greater number of anxiety (neurotic) disorders and "other" disorders than Black female students (by 30,0 and 215,7 per cent, respectively) – both of these disorders produced statistically significant (p=0,010 and 0,000, respectively) differences. On the other hand, Black female students recorded more affective disorders, adjustment disorders, V-codes and total (combined) disorders than Black male students (by 70,6; 29,4; 125,0 and 13,9 per cent, respectively) – however, only V-codes and total (combined) disorders produced statistically significant (p=0,000 each) differences. For Black male students, anxiety (neurotic) disorder was the most common presenting major diagnostic category while V-codes was the most frequently coded major diagnostic category for Black female students. Only anxiety (neurotic) disorder and "other" disorders produced statistically significant (p=0,010 and 0,000, respectively) results in favour of Black male students while only V-codes produced a statistically significant (p=0,000) result in favour of Black female students.

Table 5.38 Major diagnostic categories of Black (African, Coloured and Indian) male students (N=200) versus Black (African, Coloured and Indian) female students (N=228) presenting at the UCT-SHS-MHS (1991-1993).

Major diagnostic category	Black (A, C, I) male students[1]		Black (A, C, I) female students[1]		Unadjusted OR (with 95% CI)	Df	χ^2	p
	n	%	n	%				
Affective disorder	17	8,4	29	12,6	0,6 (0,3 - 1,3)	1	2,0	$0,159^{NS}$
Adjustment disorder	51	25,2	66	28,7	0,8 (0,5 - 1,3)	1	0,7	$0,421^{NS}$
V-codes	36	17,8	81	35,2	0,4 (0,3 - 0,6)	1	16,5	$0,000^{Sig}$
Anxiety (neurotic) disorder	57	28,2	41	17,8	1,8 (1,1 - 2,9)	1	6,6	$0,010^{Sig}$
"Other" disorders	41	20,3	13	5,7	4,3 (2,1 - 8,7)	1	21,1	$0,000^{Sig}$
Total	202	100,0	230	100,0	-	4	37,8	$0,000^{Sig}$

Number of missing responses = unknown.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.

– White student attendees

Table 5.39 demonstrates that White male students were diagnosed as presenting at the UCT-SHS-MHS with a greater number of "other" disorders than White female students (by 3,8 per cent) – this difference was statistically significant (p=0,001). On the other hand, White female students recorded more affective disorders, adjustment disorders, V-codes, anxiety (neurotic) disorders and total (combined) disorders than White male students (by 100,0; 122,9; 127,5; 51,6 and 71,1 per cent, respectively) – however, only total (combined) disorders produced a statistically significant (p=0,009) difference. For White male students, "other" disorders was the most common presenting major diagnostic category while adjustment disorder was the most frequently coded major diagnostic category for White female students. Only "other" disorders produced a statistically significant (p=0,001) result in favour of White male students.

Table 5.39 Major diagnostic categories of White male students (N=177) versus White female students (N=300) presenting at the UCT-SHS-MHS (1991-1993).

Major diagnostic category	White male students[1]		White female students[1]		Unadjusted OR (with 95% CI)	Df	χ^2	p
	n	%	n	%				
Affective disorder	18	10,0	36	11,7	0,8 (0,4 - 1,6)	1	0,3	$0,566^{NS}$
Adjustment disorder	48	26,7	107	34,7	0,7 (0,5 - 1,0)	1	3,4	$0,065^{NS}$
V-codes	29	16,1	66	21,4	0,7 (0,4 - 1,2)	1	2,1	$0,152^{NS}$
Anxiety (neurotic) disorder	31	17,2	47	15,3	1,2 (0,7 - 2,0)	1	0,3	$0,568^{NS}$
"Other" disorders	54	30,0	52	16,9	2,1 (1,3 - 3,3)	1	11,5	$0,001^{Sig}$
Total	180	100,0	308	100,0	-	4	13,6	$0,009^{Sig}$

Number of missing responses = unknown.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.

B: Individual V-codes

– Male student attendees

Table 5.40 demonstrates that Black (African, Coloured and Indian) male students were diagnosed as presenting at the UCT-SHS-MHS with a greater number of family problems, complicated bereavement, academic problems and total (combined) V-codes than White male students (by 60,0; 100,0; 50,0 and 24,1 per cent, respectively) – however, none of these individual V-codes produced a statistically significant difference. On the other hand, White male students recorded more relationship problems than Black male students (by 16,7 per cent) – this difference was not statistically significant. The number of diagnoses for the individual V-code of pre- and post-termination counselling for unplanned/unwanted pregnancies were tied. For Black male students, relationship problem was the most common presenting individual V-code as well as the most frequently coded individual V-code for White male students. However, neither of the individual V-codes produced a statistically significant result in favour of either Black male students or White male students.

Table 5.40 Individual V-codes of Black (African, Coloured and Indian) male students (N=200) versus White male students (N=177) presenting at the UCT-SHS-MHS (1991-1993).

Individual V-code	Black (A, C, I) students[1]		White students[1]		Unadjusted OR (with 95% CI)	Df	χ^2	p
	n	%	n	%				
Relationship problem	12	33,3	14	48,3	0,5 (0,2 - 1,6)	1	1,5	$0,222^{NS}$
Family problem	8	22,2	5	17,2	1,4 (0,3 - 5,7)	1	0,3	$0,618^{NS}$
Complicated bereavement	6	16,7	3	10,3	1,7 (0,3 - 9,9)	1	0,5	$0,463^{NS}$
Unplanned/unwanted pregnancy	1	2,8	1	3,4	0,8 (0,0 - 30,9)	1	0,0	$0,876^{NS}$
Academic problem	9	25,0	6	20,7	1,3 (0,3 - 4,8)	1	0,2	$0,682^{NS}$
Total V-codes	36	100,0	29	100,0	-	4	1,7	$0,789^{NS}$

Number of missing responses = unknown.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.

– Female student attendees

Table 5.41 demonstrates that Black (African, Coloured and Indian) female students were diagnosed as presenting at the UCT-SHS-MHS with a greater number of relationship problems, pre- and post-termination

counselling for unplanned/unwanted pregnancies and total (combined) V-codes than White female students (by 48,0; 60,0 and 22,7 per cent, respectively) – however, none of these individual V-codes produced a statistically significant difference. On the other hand, White female students recorded more family problems, complicated bereavements and academic problems than Black female students (by 5,5; 12,5 and 50,0 per cent, respectively) – however, none of these individual V-codes produced a statistically significant difference. For Black female students, relationship problem was the most common presenting individual V-code as well as the most frequently coded individual V-code for White female students. However, neither of the individual V-codes produced a statistically significant result in favour of either Black female students or White female students.

Table 5.41 Individual V-codes of Black (African, Coloured and Indian) female students (N=228) versus White female students (N=300) presenting at the UCT-SHS-MHS (1991-1993).

Individual V-code	Black (A, C, I) students[1]		White students[1]		Unadjusted OR (with 95% CI)	Df	χ^2	p
	n	%	n	%				
Relationship problem	37	45,7	25	37,9	1,4 (0,7- 2,8)	1	0,9	$0,341^{NS}$
Family problem	18	22,2	19	28,8	0,7 (0,3 - 1,6)	1	0,8	$0,362^{NS}$
Complicated bereavement	8	9,9	9	13,6	0,7 (0,2 - 2,1)	1	0,5	$0,478^{NS}$
Unplanned/unwanted pregnancy	16	19,8	10	15,2	1,4 (0,5 - 3,6)	1	0,5	$0,467^{NS}$
Academic problem	2	2,5	3	4,5	0,5 (0,1 - 4,1)	1	0,5	$0,490^{NS}$
Total V-codes	81	100,0	66	100,0	-	4	2,5	$0,647^{NS}$

Number of missing responses = unknown.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.

– Black (African, Coloured and Indian) student attendees

Table 5.42 demonstrates that Black male students were diagnosed as presenting at the UCT-SHS-MHS with a greater number of academic problems than Black female students (by 350,0 per cent) – however, this difference was statistically significant (p=0,000). On the other hand, Black female students recorded more relationship problems, family problems, complicated bereavements, pre- and post termination counselling for unplanned/unwanted pregnancies and total (combined) V-codes than Black male students (by 208,3; 125,0; 33,3; 1 500,0 and 125,0 per cent, respectively) – however, only pre- and post termination counselling for unplanned/unwanted pregnancy and total (combined) V-codes produced statistically significant (p=0,016 and 0,000, respectively) differences. For Black male students, relationship problem was the most common presenting individual V-code as well as the most frequently coded individual V-code for Black female students. Only academic problem produced a statistically significant (p=0,000) result in favour of Black male students while only pre- and post termination counselling for unplanned/unwanted pregnancy produced a statistically significant (p=0,016) result in favour of Black female students.

Table 5.42 Individual V-codes of Black (African, Coloured and Indian) male students (N=200) versus Black (African, Coloured and Indian) female students (N=228) presenting at the UCT-SHS-MHS (1991-1993).

Individual V-code	Black (A, C, I) male students[1]		Black (A, C, I) female students[1]		Unadjusted OR (with 95% CI)	Df	χ^2	p
	n	%	n	%				
Relationship problem	12	33,3	37	45,7	0,6 (0,2- 1,5)	1	1,6	0,212[NS]
Family problem	8	22,2	18	22,2	1,0 (0,4 - 2,8)	1	0,0	1,000[NS]
Complicated bereavement	6	16,7	8	9,9	1,8 (0,5 - 6,5)	1	1,1	0,296[NS]
Unplanned/unwanted pregnancy	1	2,8	16	19,8	0,1 (0,0 - 0,9)	1	5,8	0,016[Sig]
Academic problem	9	25,0	2	2,5	13,2 (2,4 - 94,7)	1	14,9	0,000[Sig]
Total V-codes	36	100,0	81	100,04	-	4	20,3	0,000[Sig]

Number of missing responses = unknown.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.

– White student attendees

Table 5.43 demonstrates that White male students were diagnosed as presenting at the UCT-SHS-MHS with a greater number of academic problems than White female students (by 100,0 per cent) – this difference was statistically significant (p=0,013). On the other hand, White female students recorded more relationship problems, family problems, complicated bereavements, pre- and post termination counselling for unplanned/unwanted pregnancies and total (combined) V-codes than White male students (by 78,6; 280,0; 200,0; 900,0 and 127,6 per cent, respectively) – however, only total (combined) V-codes produced a statistically significant (p=0,046) difference. For White male students, relationship problem was the most common presenting individual V-code as well as the most frequently coded individual V-code for White female students. Only academic problem produced a statistically significant (p=0,013) result in favour of White male students.

Table 5.43 Individual V-codes of White male students (N=177) versus White female students (N=300) presenting at the UCT-SHS-MHS (1991-1993).

Individual V-code	White male students[1]		White female students[1]		Unadjusted OR (with 95% CI)	Df	χ^2	p
	n	%	n	%				
Relationship problem	14	48,3	25	37,9	1,5 (0,6- 4,1)	1	0,9	0,343[NS]
Family problem	5	17,2	19	28,8	0,5 (0,2 - 1,7)	1	1,4	0,233[NS]
Complicated bereavement	3	10,3	9	13,6	0,7 (0,1 - 3,3)	1	0,2	0,657[NS]
Unplanned/unwanted pregnancy	1	3,4	10	15,2	0,2 (0,0 - 1,7)	1	2,7	0,101[NS]
Academic problem	6	20,7	3	4,5	5,5 (1,1 - 30,6)	1	6,1	0,013[Sig]
Total V-codes	29	100,0	66	100,0	-	4	9,7	0,046[Sig]

Number of missing responses = unknown.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.

(b) Objective 2 (patients versus controls) and Objective 3 (patients versus the total student community)

Research Hypothesis Ia of the UCT-SHS study is as follows:

Female students are more likely to present with mental disorders at the UCT-SHS-MHS than males.

Research Hypothesis IIa of the UCT-SHS study is as follows:

Black students are more likely to present with mental disorders at the UCT-SHS-MHS than their White peers.

In these objectives Research Hypothesis Ia and Research Hypothesis IIa are either confirmed or rejected according to the unadjusted odds ratios or χ^2 tests (p-values) for UCT-SHS-MHS attendees (patients) versus UCT-SHS medical attendees (controls) [Objective 2] or to additional usage/utilisation rates per 1 000 students and utilisation ratios for patients versus registered UCT students (the total student community) [Objective 3].

(i) Non-abridged format ("Conventional" format)

A: Gender stratification

– Male student attendees

Table 5.44 demonstrates that only Coloured male students are statistically (p=0,010) more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS which corresponds to a likelihood ratio ($\%_1:\%_2$) of 1,667. In fact, these students are 42,9 per cent overrepresented (with a standardised residual of +2,2) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0. Conversely, only White male students are statistically (p=0,026) less likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS which corresponds to a likelihood ratio ($\%_1:\%_2$) of 0,875. In fact, these students are 9,6 per cent underrepresented (with a standardised residual of -1,3) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0. The race population group-specific variable (stratified according to male gender) with its four subcategories did produce a statistically significant (p=0,026) result.

However, Table 5.45 demonstrates that only African male students are statistically (p=0,000) more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-

MHS than their representation of the student community would suggest which corresponds to a likelihood ratio ($\%_1$:$\%_3$) of 2,337. In fact, these students are 126,1 per cent overrepresented (with a standardised residual of +10,3) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0. Conversely, only White male students are statistically (p=0,000) less likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than their representation of the student community would suggest which corresponds to a likelihood ratio ($\%_1$:$\%_3$) of 0,694. In fact, these students are 30,0 per cent underrepresented (with a standardised residual of -4,8) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0. In addition the race/population group-specific variable (stratified according to male gender) with its four subcategories did produce a statistically significant (p=0,000) result.

– Female student attendees

Table 5.44 demonstrates that only Coloured female students are statistically (p=0,013) more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS which corresponds to a likelihood ratio ($\%_1$:$\%_2$) of 1,412. In fact, these students are 21,6 per cent overrepresented (with a standardised residual of +1,8) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0. Conversely, only African female students are statistically (p=0,002) less likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS which corresponds to a likelihood ratio ($\%_1$:$\%_2$) of 0,745. In fact, these students are 17,2 per cent underrepresented (with a standardised residual of –2,1) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0. In addition, the race population group-specific variable (stratified according to female gender) with its four subcategories did produce a statistically significant (p=0,002) result.

However, Table 5.45 demonstrates that only African female students are statistically (p=0,000) more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than their representation of the student community would suggest which corresponds to a likelihood ratio ($\%_1$:$\%_3$) of 2,009. In fact, these students are 91,5 per cent overrepresented (with a standardised residual of +7,3) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0. Conversely, only White female students are statistically (p=0,000) less likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than their representation of the student community would suggest which corresponds to a likelihood ratio ($\%_1$:$\%_3$) of 0,823. In fact, these students are 16,9 per cent underrepresented (with a standardised residual of –3,2) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0. In

addition the race/population group-specific variable (stratified according to female gender) with its four subcategories did produce a statistically significant (p=0,000) result.

B: Race/population group stratification

– African student attendees

Table 5.44 demonstrates that African female students are not statistically more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS which corresponds to a likelihood ratio ($\%_1$:$\%_2$) of 1,166. In fact, these students are 11,3 per cent overrepresented (with a standardised residual of +1,2) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0.

However, Table 5.45 demonstrates that African female students are statistically (p=0,000) more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than their representation of the student community would suggest which corresponds to a likelihood ratio ($\%_1$:$\%_3$) of 1,368. In fact, these students are 36,8 per cent overrepresented (with a standardised residual of +3,5) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0.

– Coloured student attendees

Table 5.44 demonstrates that Coloured female students are not statistically more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS which corresponds to a likelihood ratio ($\%_1$:$\%_2$) of 1,178. In fact, these students are 9,3 per cent overrepresented (with a standardised residual of +0,8) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0.

However, Table 5.45 demonstrates that Coloured female students are statistically (p=0,000) more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than their representation of the student community would suggest which corresponds to a likelihood ratio ($\%_1$:$\%_3$) of 1,398. In fact, these students are 40,0 per cent overrepresented (with a standardised residual of +3,1) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0.

– Indian student attendees

Table 5.44 demonstrates that Indian female students are statistically (p=0,008) more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS which corresponds to a likelihood ratio ($\%_1$:$\%_2$) of 1,863. In fact, these students are 42,9 per cent overrepresented (with a standardised residual of +1,7) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0.

In addition, Table 5.45 demonstrates that Indian female students are statistically (p=0,019) more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than their representation of the student community would suggest which corresponds to a likelihood ratio ($\%_1$:$\%_3$) of 1,476. In fact, these students are 47,9 per cent overrepresented (with a standardised residual of +1,8) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0.

– White student attendees

Table 5.44 demonstrates that White female students are statistically (p=0,000) more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS which corresponds to a likelihood ratio ($\%_1$:$\%_2$) of 1,456. In fact, these students are 27,4 per cent overrepresented (with a standardised residual of +4,2) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0.

In addition, Table 5.45 demonstrates that Indian female students are statistically (p=0,000) more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than their representation of the student community would suggest which corresponds to a likelihood ratio ($\%_1$:$\%_3$) of 1,483. In fact, these students are 48,3 per cent overrepresented (with a standardised residual of +6,9) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0.

Table 5.44 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of controls (N=1 924) stratified by race/population group and gender.

Race/population group[1] and gender	n_1	$\%_1$	n_2	$\%_2$	Unadjusted OR (with 95% CI)	Df	χ^2	p
(a) Gender stratification								
Males								
Africans	149	39,5	403	36,5	1,1 (0,9 - 1,5)	1	1,1	$0,301^{NS}$
Coloureds	36	9,5	63	5,7	1,7 (1,1 - 2,7)	1	6,6	$0,010^{Sig}$
Indians	15	4,0	46	4,2	1,0 (0,5 - 1,8)	1	0,0	$0,872^{NS}$
Whites	177	46,9	591	53,6	0,8 (0,7 - 1,0)	1	5,0	$0,026^{Sig}$
Subtotal	377	100,0	1 103	100,0	-	3	9,3	$0,026^{Sig}$
Females								
Africans	122	23,1	253	31,0	0,7 (0,5 - 0,9)	1	9,9	$0,002^{Sig}$
Coloureds	85	16,1	93	11,4	1,5 (1,1 - 2,1)	1	6,2	$0,013^{Sig}$
Indians	21	4,0	21	2,6	1,6 (0,8 - 3,0)	1	2,1	$0,149^{NS}$
Whites	300	56,8	449	55,0	1,1 (0,9 - 1,4)	1	0,4	$0,518^{NS}$
Subtotal	528	100,0	816	100,0	-	3	14,7	$0,002^{Sig}$
(b) Race/population group[1] stratification								
Africans								
Males	149	55,0	403	61,4	-	-	-	-
Females	122	45,0	253	38,6	1,3 (1,0 - 1,8)	1	3,3	$0,069^{NS}$
Subtotal	271	100,0	656	100,0	-	-	-	-
Coloureds								
Males	36	29,8	63	40,4	-	-	-	-
Females	85	70,2	93	59,6	1,6 (0,9 - 2,7)	1	3,4	$0,067^{NS}$
Subtotal	121	100,0	156	100,0	-	-	-	-
Indians								
Males	15	41,7	46	68,7	-	-	-	-
Females	21	58,3	21	31,3	3,0 (1,27 - 7,7)	1	7,1	$0,008^{Sig}$
Subtotal	36	100,0	67	100,0	-	-	-	-
Whites								
Males	177	37,1	591	56,8	-	-	-	-
Females	300	62,9	449	43,2	2,2 (1,8 - 2,8)	1	50,9	$0,000^{Sig}$
Subtotal	477	100,0	1 040	100,0	-	-	-	-

Number of missing responses = 27 for patients and 5 for controls.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
n_1 and $\%_1$ refer to patients.
n_2 and $\%_2$ refer to controls.

Table 5.45 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of total student community (N=23 158) stratified by race/population group and gender.

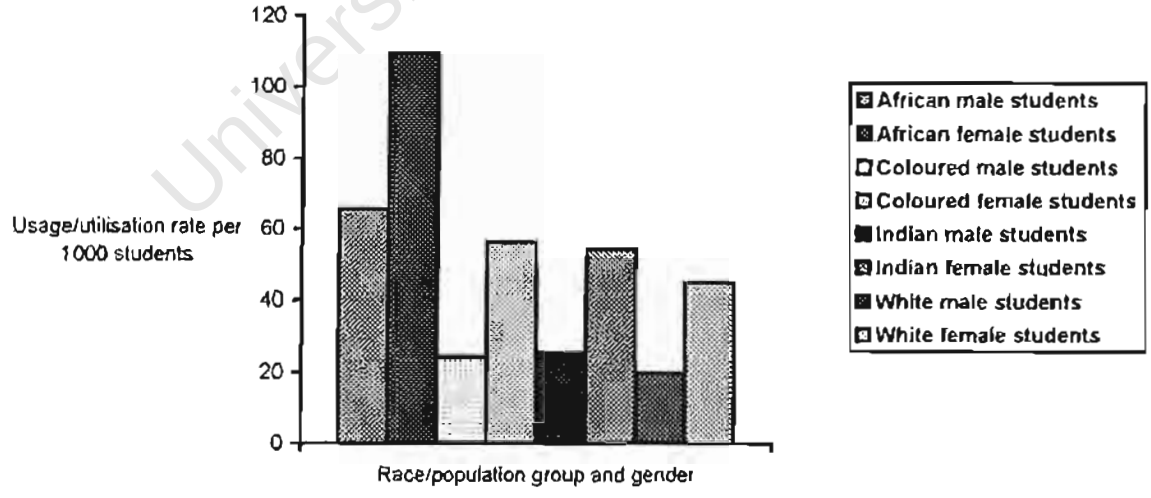
Race/population group[1] and gender	n_1	$\%_1$	n_3	$\%_3$	Unadjusted OR (with 95% CI)	Df	χ^2	p
(a) Gender stratification								
Males								
Africans	149	39,5	2 269	16,9	3,4 (2,7 - 4,2)	1	141,9	$0,000^{Sig}$
Coloureds	36	9,5	1 494	11,1	0,8 (0,6 - 1,2)	1	1,0	$0,329^{NS}$
Indians	15	4,0	591	4,4	0,9 (0,5 - 1,6)	1	0,2	$0,690^{NS}$
Whites	177	46,9	9 096	67,6	0,4 (0,4 - 0,5)	1	75,8	$0,000^{Sig}$
Subtotal	377	100,0	13 450	100,0		3	143,5	$0,000^{Sig}$
Females								
Africans	122	23,1	1 113	11,5	2,5 (2,0 - 3,1)	1	74,5	$0,000^{Sig}$
Coloureds	85	16,1	1 506	15,5	1,1 (0,8 - 1,3)	1	0,1	$0,704^{NS}$
Indians	21	4,0	386	4,0	1,0 (0,6 - 1,6)	1	0,0	$0,999^{NS}$
Whites	300	56,8	6 701	69,0	0,6 (0,5 - 0,7)	1	39,0	$0,000^{Sig}$
Subtotal	528	100,0	9 706	100,0		3	78,2	$0,000^{Sig}$

(b) Race/population group[1] stratification								
Africans								
Males	149	55,0	2 269	67,1	-	-	-	-
Females	122	45,0	1 113	32,9	1,8 (1,4 - 2,3)	1	19,6	0,000[Sig]
Subtotal	271	100,0	3 382	100,0	-	-	-	-
Coloureds								
Males	36	29,8	1 494	49,8	-	-	-	-
Females	85	70,2	1 506	50,2	2,4 (1,6 - 3,7)	1	20,3	0,000[Sig]
Subtotal	121	100,0	3 000	100,0	-	-	-	-
Indians								
Males	15	41,7	591	60,5	-	-	-	-
Females	21	58,3	386	39,5	2,2 (1,1 - 4,5)	1	5,5	0,019[Sig]
Subtotal	36	100,0	977	100,0	-	-	-	-
Whites								
Males	177	37,1	9 096	57,6	-	-	-	-
Females	300	62,9	6 701	42,4	2,4 (2,0 - 2,9)	1	84,4	0,000[Sig]
Subtotal	477	100,0	15 797	100,0	-	-	-	-

Number of missing responses = 27 for patients and 2 for the total student community.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
n_1 and $\%_1$ refer to patients.
n_3 and $\%_3$ refer to the total student community.

Figure 5.9 illustrates and Table 5.46 demonstrates that African female students have the highest usage/utilisation rate and, consequently, utilisation ratio followed by African male students, Coloured female students and Indian female students (all demonstrate a usage/utilisation rate greater than 50,0 per 1 000 students).

Figure 5.9 Usage/utilisation rate per 1 000 students in students presenting at the UCT-SHS-MHS (1991-1993) stratified by race/population group and gender.



Refer to Table 5.46 for values of usage/utilisation rates.

Table 5.46 Usage/utilisation rate per 1 000 students and utilisation ratio in students presenting at the UCT-SHS-MHS (1991-1993) stratified by race/population group and gender.

Race/population group[1] and gender	Usage/utilisation rate per 1 000 students	Deviation from mean usage/utilisation rate per 1 000 students	Utilisation ratio
African male students	65,7	+26,6	1,68
African female students	109,6	+70,5	2,80
Coloured male students	24,1	-15,0	0,62
Coloured female students	56,4	+17,3	1,44
Indian male students	25,4	-13,7	0,65
Indian female students	54,4	+15,3	1,39
White male students	19,5	-19,6	0,50
White female students	44,8	+5,7	1,15
Mean	39,1	-	1,00

[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.

(ii) Non-abridged format ("Matrix" format)

– Overview

This format has been employed to assess the effect of gender (male or female appearing as separate subheadings) on patients versus controls (Objective 2) and patients versus total student community (Objective 3). The layout adopted has been to compare the individual subcategory to the remaining subcategories (by means of contingency (2x2) tables for data fulfilling Objectives 2 and 3) – the initial subheading in Tables 5.47 and 5.48 will detail African male and female students being tested for this variable-versus Coloured, Indian and White male and female students, respectively, while the second subheading in Tables 5.47 and 5.48 will detail Coloured male and female students versus Indian and White male and female students, respectively, while the final subheading in Tables 5.47 and 5.48 will detail Indian male and female students versus White male and female students. This standardised format will prevent the repetition of reverse comparisons.

– Male student attendees

Table 5.47 demonstrates that African male students appear only minimally more likely than White male students to present at the UCT-SHS-MHS than attend the UCT-SHS with purely medical complaints as reflected by a statistically insignificant OR for patients versus controls. In fact, African male students are 6,7 per cent overrepresented (with a standardised residual of +0,9) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0. (These OR values, in turn, for African male versus White male students are somewhat higher than those recorded for African male versus Indian male students (by 0,2) which, in turn, are somewhat higher than those recorded for African male versus Coloured male students (by a further 0,5), thereby suggesting the existence of a positive gradient between Coloured male, Indian male and White male students (relative to African male students) in making use of university mental health services). In addition, the results in Table 5.48 suggest that African male students are more likely than White male students to present at the UCT-SHS-MHS as reflected by a statistically significant (p=0,000) positive OR for patients versus total

student community. In fact, African male students are 31,6 per cent overrepresented (with a standardised residual of +5,1) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0. (These OR values for African male versus White male students are somewhat higher than those recorded for African male versus Indian male students (by 0,8) which, in turn, are minimally lower than those recorded for African male versus Coloured male students (by less than 0,1), thereby further suggesting the existence of a positive gradient between Coloured male or Indian male and White male students (relative to African male students) relative to UCT-SHS-MHS attendance.) This situation only partially matches that recorded for race/population group (independent of gender) insofar as African male students appear only minimally less inclined than White male students to present at the UCT-SHS-MHS than attend the UCT-SHS – hence male gender appears to increase the usage of university mental health services by African students.

Table 5.47 demonstrates that Coloured male students are more likely than White male students to present at the UCT-SHS-MHS than attend the UCT-SHS with purely medical complaints as reflected by a statistically significant (p=0,004) positive OR for patients versus controls. In fact, Coloured male students are 6,2 per cent overrepresented (with a standardised residual of +0,9) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0. (These OR values, in turn, for Coloured male versus White male students are somewhat higher than those recorded for Coloured male versus Indian male students (by 0,3), thereby suggesting the existence of a positive gradient between Indian male and White male students (relative to Coloured male students) in making use of university mental health services). In addition, the results in Table 5.48 suggest that Coloured male students are only minimally more likely than White male students to present at the UCT-SHS-MHS as reflected by a statistically insignificant OR for patients versus total student community. In fact, Coloured male students are 3,2 per cent overrepresented (with a standardised residual of +0,4) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0. (These OR values for Coloured male versus White male students are slightly higher than those recorded for Coloured male versus Indian male students (by 0,4), thereby suggesting the existence of a positive gradient between Indian male and White male students (relative to Coloured male students) relative to UCT-SHS-MHS attendance). This situation matches that recorded for race/population group (independent of gender) with the exception of the presence of a statistically significant (p=0,004) positive OR for patients versus total student community – hence male gender appears to only slightly reduce the usage of university mental health services by Coloured students.

Table 5.47 demonstrates that Indian male students are also slightly more likely than White male students to present at the UCT-SHS-MHS than attend the UCT-SHS with purely medical complaints as reflected by a statistically insignificant OR for patients versus controls. In fact, Indian male students are 0,5 per cent overrepresented (with a standardised residual of +0,1) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0. In addition, the results in Table 5.48 suggest that Indian male students are only minimally more likely than White male

students to present at the UCT-SHS-MHS as reflected by a statistically insignificant OR for patients versus total student community. In fact, Indian male students are 1,8 per cent overrepresented (with a standardised residual of +0,2) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0. This situation matches that recorded for race/population group (independent of gender).

– Female student attendees

Table 5.47 demonstrates that African female students are less likely than White female students to present at the UCT-SHS-MHS than attend the UCT-SHS with purely medical complaints as reflected by a statistically significant (p=0,014) negative OR for patients versus controls. In fact, African female students are 6,7 per cent underrepresented (with a standardised residual of –1,1) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0. (These OR values, in turn, for African female versus White female students are somewhat higher than those recorded for African female versus Indian female students (by 0,2) which, in turn, are fractionally higher than those recorded for African female versus Coloured female students (by less than 0,1), thereby suggesting the existence of a positive gradient between Coloured female, Indian female and White female students (relative to African female students) in making use of mental health services. However, the results in Table 5.48 suggest that African female students are more likely than White female students to present at the UCT-SHS-MHS as reflected by a statistically (p=0,000) positive OR for patients versus total student community. In fact, African female students are 16,4 per cent overrepresented (with a standardised residual of +3,1) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0. (These OR values for African female versus White female students are somewhat higher than those recorded for African female versus Indian female students (by 0,5) which, in turn, are fractionally lower than those recorded for African female versus Coloured female students (by less than 0,1), thereby further suggesting the existence of a positive gradient between Coloured female or Indian female and White female students (relative to African female students) relative to UCT-SHS-MHS attendance). This situation matches that previously recorded for race/population group (independent of gender) with the exception of the presence of a statistically insignificant OR for patients versus controls – hence female gender appears to reduce the usage of university mental health services by African students.

Table 5.47 demonstrates that Coloured female students are only minimally more likely than White female students to present at the UCT-SHS-MHS than attend the UCT-SHS with purely medical complaints as reflected by a statistically insignificant OR for patients versus controls. In fact, Coloured female students are 3,6 per cent overrepresented (with a standardised residual of +0,6) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0. (These OR values, in turn, for Coloured female versus White female students are somewhat higher than those recorded for Coloured female versus Indian female students (by 0,5), thereby suggesting the existence of a positive gradient between Indian female and White female students (relative to Coloured

female students) in making use of university mental health services). In addition, the results in Table 5.48 suggest that Coloured female students are only minimally more likely than White female students to present at the UCT-SHS-MHS as reflected by a statistically insignificant OR for patients versus total student community. In fact, Coloured female students are 4,4 per cent overrepresented (with a standardised residual of +0,8) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0. (These OR values for Coloured female versus White female students are slightly higher than those recorded for Coloured female versus Indian female students (by 0,3), thereby suggesting the existence of a positive gradient between Indian female and White female students (relative to Coloured female students) relative to UCT-SHS-MHS attendance.) This situation matches that recorded for race/population group (independent of gender) with the exception of the presence of a statistically significant (p=0,004) positive OR for patients versus total student community – hence female gender appears to (only minimally) reduce the usage of university mental health services by Coloured students.

Table 5.47 demonstrates that Indian female students are also slightly more inclined than White female students to present at the UCT-SHS-MHS than attend the UCT-SHS with purely medical complaints as reflected by a statistically insignificant OR for patients versus controls. In fact, Indian female students are 1,3 per cent overrepresented (with a standardised residual of +0,2) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0. In addition, the results in Table 5.48 suggest that Indian female students are only minimally more likely than White female students to present at the UCT-SHS-MHS as reflected by a statistically insignificant OR for patients versus total student community. In fact, Indian female students are 1,1 per cent overrepresented (with a standardised residual of +0,2) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0. (This situation matches that recorded for race/population group (independent of gender).

Table 5.47 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of controls (N=1 924) stratified by race/population group and gender according to "matrix" format.

Race/population group[1] and gender	n_1	$\%_1$	n_2	$\%_2$	Unadjusted OR (with 95% CI)	Df	χ^2	p
Males								
Africans								
Coloureds	36	19,5	63	13,5	0,6 (0,4 - 1,0)	1	3,6	$0,057^{NS}$
Indians	15	9,1	46	10,2	1,1 (0,6 - 2,0)	1	0,2	$0,687^{NS}$
Whites	177	54,3	591	59,5	1,3 (1,0 - 2,0)	1	2,7	$0,101^{NS}$
Coloureds								
Indians	15	29,4	46	42,4	1,7 (0,8 - 3,3)	1	2,4	$0,121^{NS}$
Whites	177	83,1	591	90,4	2,0 (1,3 - 3,3)	1	8,4	$0,004^{Sig}$
Indians								
Whites	177	92,2	591	92,8	1,1 (0,6 - 2,0)	1	0,1	$0,783^{NS}$
Females								
Africans								
Coloureds	85	41,1	93	26,9	0,5 (0,4 - 0,8)	1	11,9	$0,001^{Sig}$
Indians	21	14,7	21	7,7	0,5 (0,3 - 0,9)	1	5,1	$0,024^{Sig}$
Whites	300	71,1	449	64,0	0,7 (0,6 - 0,9)	1	6,0	$0,014^{Sig}$

Coloureds								
Indians	21	19,8	21	18,4	0,9 (0,5 - 1,7)	1	0,1	0,793^{NS}
Whites	300	77,9	449	82,8	1,4 (1,0 - 2,0)	1	3,5	0,061^{NS}
Indians								
Whites	300	93,5	449	95,5	1,4 (0,8 - 2,5)	1	1,6	0,201^{NS}

Number of missing responses = 27 for patients and 5 for controls.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
n_1 and $\%_1$ refer to patients.
n_2 and $\%_2$ refer to controls.

Table 5.48 Frequency and percentage of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of the total student community (N=23 158) stratified by race/population group and gender according to "matrix" format.

Race/population group[1] and gender	n_1	$\%_1$	n_3	$\%_3$	Unadjusted OR (with 95% CI)	Df	χ^2	p
Males								
Africans								
Coloureds	36	19,5	1 494	39,7	2,5 (2,0 - 5,0)	1	33,6	0,000^{Sig}
Indians	15	9,1	591	20,7	2,5 (1,7 - 5,0)	1	14,1	0,000^{Sig}
Whites	177	54,3	9 096	80,0	3,3 (2,5 - 5,0)	1	139,2	0,000^{Sig}
Coloureds								
Indians	15	29,4	591	28,3	0,9 (0,5 - 1,7)	1	0,0	0,864^{NS}
Whites	177	83,1	9 096	85,9	1,3 (0,9 - 1,7)	1	1,4	0,237^{NS}
Indians								
Whites	177	92,2	9 096	93,9	1,3 (0,8 - 2,0)	1	1,0	0,317^{NS}
Females								
Africans								
Coloureds	85	41,1	1 506	57,5	2,0 (1,4 - 2,5)	1	24,9	0,000^{Sig}
Indians	21	14,7	386	25,8	2,0 (1,3 - 3,3)	1	10,1	0,001^{Sig}
Whites	300	71,1	6 701	85,8	2,5 (2,0 - 3,3)	1	78,6	0,000^{Sig}
Coloureds								
Indians	21	19,8	386	20,4	1,0 (0,6 - 1,7)	1	0,0	0,877^{NS}
Whites	300	77,9	6 701	81,6	1,3 (1,0 - 1,7)	1	3,5	0,053^{NS}
Indians								
Whites	300	93,5	6 701	94,6	1,3 (0,8 - 2,0)	1	0,8	0,376^{NS}

Number of missing responses = 27 for patients and 2 for the total student community.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
n_1 and $\%_1$ refer to patients.
n_3 and $\%_3$ refer to the total student community.

(iii) Abridged format ("Conventional" format)

– Patient-specific data

A: Gender stratification

– Male student attendees

Table 5.49 demonstrates that Black (African, Coloured and Indian) male students are more likely than White students to present at the UCT-SHS-MHS than attend the UCT-SHS with purely medical complaints as reflected by a statistically significant (p=0,026) positive OR for patients versus controls which corresponds to a likelihood ratio ($\%_1$:$\%_2$) of 1,144. (This OR value, in turn, for Black male versus White male students (unadjusted OR of 1,3) is somewhat higher than that previously recorded for African male versus non-

African (Coloured, Indian and White) male students (unadjusted OR of 1,1), thereby suggesting the existence of a negative gradient between the extended Black format and the contracted African format in making use of university mental health services. This finding is compatible with results previously outlined in the "matrix" format.) In fact, Black male students are 10,3 per cent overrepresented (with a standardised residual of +1,4) and White male students are 9,5 per cent underrepresented (with a standardised residual of –1,3) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0.

However, the results in Table 5.50 suggest that Black male students are more likely than White male students to present at the UCT-SHS-MHS as reflected by a statistically significant (p=0,000) positive OR for patients versus total student community which corresponds to a likelihood ratio ($\%_1$:$\%_3$) of 1,639. (This OR value for Black male versus White male students (unadjusted OR of 2,4) is somewhat lower than that previously recorded for African male versus non-African (Coloured, Indian and White) male students (unadjusted OR of 3,4), thereby suggesting the existence of a positive gradient between the extended Black format and the contracted African format relative to UCT-SHS-MHS attendance. This finding is compatible with results previously outlined in the "matrix" format). Here Black male students are 61,0 per cent overrepresented (with a standardised residual of +6,8) and White male students are 30,0 per cent underrepresented (with a standardised residual of –4,8) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0. These findings therefore confirm Research Hypothesis IIa for male student attendees for Objectives 2 and 3 of the UCT-SHS study.

– Female student attendees

Table 5.49 demonstrates that Black (African, Coloured and Indian) female students appear only minimally less likely than White female students to present at the UCT-SHS-MHS than attend the UCT-SHS with purely medical complaints as reflected by a statistically insignificant OR for patients versus controls which corresponds to a likelihood ratio ($\%_1$:$\%_2$) of 0,960. (This OR value, in turn, for Black female versus White female students (unadjusted OR of 0,9) is somewhat higher than that previously recorded for African female versus non-African (Coloured, Indian and White) female students (unadjusted OR of 0,7), thereby suggesting the existence of a negative gradient between the extended Black format and the contracted African format in making use of university mental health services. This finding is compatible with results previously outlined in the "matrix" format.) In fact, White female students are 2,0 per cent overrepresented (with a standardised residual of +0,3) and Black female students are 2,5 per cent underrepresented (with a standardised residual of –0,4) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0.

However, the results in Table 5.50 suggest that Black female students are more likely than White female students to present at the UCT-SHS-MHS as reflected by a statistically significant (p=0,000) positive OR for patients versus total student community which corresponds to a likelihood ratio ($\%_1$:$\%_3$) of 1,394. (This OR value for Black female versus White female students (unadjusted OR of 1,8) is somewhat lower than that

previously recorded for African female versus non-African (Coloured, Indian and White) female students (unadjusted OR of 2,5), thereby suggesting the existence of a positive gradient between the extended Black format and the contracted African format relative to UCT-SHS-MHS attendance. This finding is compatible with results previously outlined in the "matrix" format). Here Black female students are 36,7 per cent overrepresented (with a standardised residual of +4,7) and White female students are 16,9 per cent underrepresented (with a standardised residual of –3,2) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0. These findings therefore reject Research Hypothesis IIa for female student attendees for Objective 2 of the UCT-SHS study but do confirm Research Hypothesis IIa for female student attendees for Objective 3 of the UCT-SHS study.

B: Race/population group stratification

– Black (African, Coloured and Indian) student attendees

Table 5.49 demonstrates that Black female students are more likely than Black male students to present at the UCT-SHS-MHS than attend the UCT-SHS with purely medical complaints as reflected by a statistically significant (p=0,000) OR for patients versus controls which corresponds to a likelihood ratio ($\%_1$:$\%_2$) of 1,306. (This OR value, in turn, for Black female versus Black male students (unadjusted OR of 1,6) is somewhat higher than that previously recorded for African female versus African male students (unadjusted OR of 1,3), thereby suggesting the existence of a negative gradient between the extended Black format and the contracted African format in making use of university mental health services. This finding is compatible with results previously outlined in the "matrix" format.) In fact, Black female students are 17,0 per cent overrepresented (with a standardised residual of +2,4) and Black male students are 14,2 per cent underrepresented (with a standardised residual of –2,2) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0.

In addition, the results in Table 5.50 suggest that Black female students are more likely than Black male students to present at the UCT-SHS-MHS as reflected by a statistically significant (p=0,000) positive OR for patients versus total student community which corresponds to a likelihood ratio ($\%_1$:$\%_3$) of 1,456. (This OR value for Black female versus Black male students (unadjusted OR of 1,7) is somewhat lower than that previously recorded for African female versus African male students (unadjusted OR of 1,8), thereby suggesting the existence of a positive gradient between the extended Black format and the contracted African format relative to UCT-SHS-MHS attendance. This finding is compatible with results previously outlined in the "matrix" format). Here Black female students are 30,4 per cent overrepresented (with a standardised residual of +4,0) and Black male students are 21,0 per cent underrepresented (with a standardised residual of –3,3) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0. These findings therefore confirm Research Hypothesis Ia for Black student attendees for both Objective 2 and Objective 3 of the UCT-SHS study.

– White student attendees

Table 5.49 demonstrates that White female students are more likely than White male students to present at the UCT-SHS-MHS than attend the UCT-SHS with purely medical complaints as reflected by a statistically significant (p=0,000) OR for patients versus controls which corresponds to a likelihood ratio ($\%_1$:$\%_2$) of 1,456. In fact, White female students are 27,4 per cent overrepresented (with a standardised residual of +4,2) and White male students are 26,7 per cent underrepresented (with a standardised residual of –4,2) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0.

In addition, the results in Table 5.50 suggest that White female students are more likely than White male students to present at the UCT-SHS-MHS as reflected by a statistically significant (p=0,000) positive OR for patients versus total student community which corresponds to a likelihood ratio ($\%_1$:$\%_3$) of 1,483. Here White female students are 48,3 per cent overrepresented (with a standardised residual of +6,9) and White male students are 35,4 per cent underrepresented (with a standardised residual of –5,9) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0. These findings therefore confirm Research Hypothesis Ia for White student attendees for both Objective 2 and Objective 3 of the UCT-SHS study.

Table 5.49 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of controls (N=1 924) stratified by gender and Black (African, Coloured and Indian) students versus White students.

(a) Unadjusted ORs and χ2 tests								
Race/population group[1] and gender	**n_1**	**$\%_1$**	**n_2**	**$\%_2$**	**Unadjusted OR (with 95% CI)**	**Df**	**χ^2**	**p**
(a) Gender stratification								
Males								
Blacks (A, C, I)	200	53,1	512	46,4	1,3 (1,0 - 1,7)	1	5,0	$0,026^{Sig}$
Whites	177	46,9	591	53,6	-	-	-	-
Subtotal	377	100,0	1 103	100,0	-	-	-	-
Females								
Blacks (A, C, I)	228	43,2	367	45,0	-	-	-	-
Whites	300	56,8	449	55,0	1,1 (0,9 - 1,4)	1	0,4	$0,518^{NS}$
Subtotal	528	100,0	816	100,0	-	-	-	-
(b) Race/population group[1] stratification								
Blacks (A, C, I)								
Males	200	46,7	512	58,2	-	-	-	-
Females	228	53,3	367	41,8	1,6 (1,3 - 2,0)	1	15,4	$0,000^{Sig}$
Subtotal	428	100,0	879	100,0	-	-	-	-
Whites								
Males	177	37,1	591	56,8	-	-	-	-
Females	300	62,9	449	43,2	2,2 (1,8 - 2,8)	1	50,9	$0,000^{Sig}$
Subtotal	477	100,0	1 040	100,0	-	-	-	-

(b) Expected frequencies						
Race/population group[1] and gender	Observed frequency$_1$	Expected frequency$_1$	Difference between observed and expected frequency$_1$	Observed frequency$_2$	Expected frequency$_2$	Difference between observed and expected frequency$_2$
(a) Gender stratification						
Males						
Blacks (A, C, I)	200	181,4	+18,6 (+10,3%)	512	530,6	-18,6 (-3,5%)
Whites	177	195,6	-18,6 (-9,5%)	591	572,4	+18,6 (+3,2%)
Subtotal	377	377,0	-	1 103	1 103,0	-
Females						
Blacks (A, C, I)	228	233,8	-5,8 (-2,5%)	367	361,2	+5,8 (+1,6%)
Whites	300	294,2	+5,8 (+2,0%)	449	454,8	-5,8 (-1,3%)
Subtotal	528	528,0	-	816	816,0	-
(b) Race/population group[1] stratification						
Blacks (A, C, I)						
Males	200	233,2	-33,2 (-14,2%)	512	478,8	+33,2 (+6,9%)
Females	228	194,8	+33,2 (+17,0%)	367	400,2	-33,2 (-8,3%)
Subtotal	428	428,0	-	879	879,0	-
Whites						
Males	177	241,5	-64,5 (-26,7%)	591	526,5	+64,5 (+12,3%)
Females	300	235,5	+64,5 (+27,4%)	449	513,5	-64,5 (-12,6%)
Subtotal	477	477,0	-	1 040	1 040,0	-

Number of missing responses = 27 for patients and 5 for controls.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
n_1 and $\%_1$ refer to patients.
Observed frequency$_1$ and expected frequency$_1$ refer to patients.
n_2 and $\%_2$ refer to controls.
Observed frequency$_2$ and expected frequency$_2$ refer to controls.

Table 5.50 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of total student community (N=23 158) stratified by gender and Black (African, Coloured and Indian) students versus White students.

(a) Unadjusted ORs and χ2 tests								
Race/population group[1] and gender	n_1	$\%_1$	n_3	$\%_3$	Unadjusted OR (with 95% CI)	Df	χ^2	ρ
(a) Gender stratification								
Males								
Blacks (A, C, I)	200	53,1	4 354	32,4	2,4 (2,0 - 3,0)	1	75,8	0,000^{Sig}
Whites	177	46,9	9 096	67,6	-	-	-	-
Subtotal	377	100,0	13 450	100,0	-	-	-	-
Females								
Blacks (A, C, I)	228	43,2	3 005	31,0	1,8 (1,5 - 2,1)	1	39,0	0,000^{Sig}
Whites	300	56,8	6 701	69,0	-	-	-	-
Subtotal	528	100,0	9 706	100,0	-	-	-	-
(b) Race/population group[1] stratification								
Blacks (A, C, I)								
Males	200	46,7	4 354	59,2	-	-	-	-
Females	228	53,3	3 005	40,8	1,7 (1,4 - 2,1)	1	1	0,000^{Sig}
Subtotal	428	100,0	7 359	100,0	-	-	-	-
Whites								
Males	177	37,1	9 096	57,6	-	-	-	
Females	300	62,9	6 701	42,4	2,4 (2,0 - 2,9)	1	84,4	0,000^{Sig}
Subtotal	477	100,0	15 797	100,0	-	-	-	-

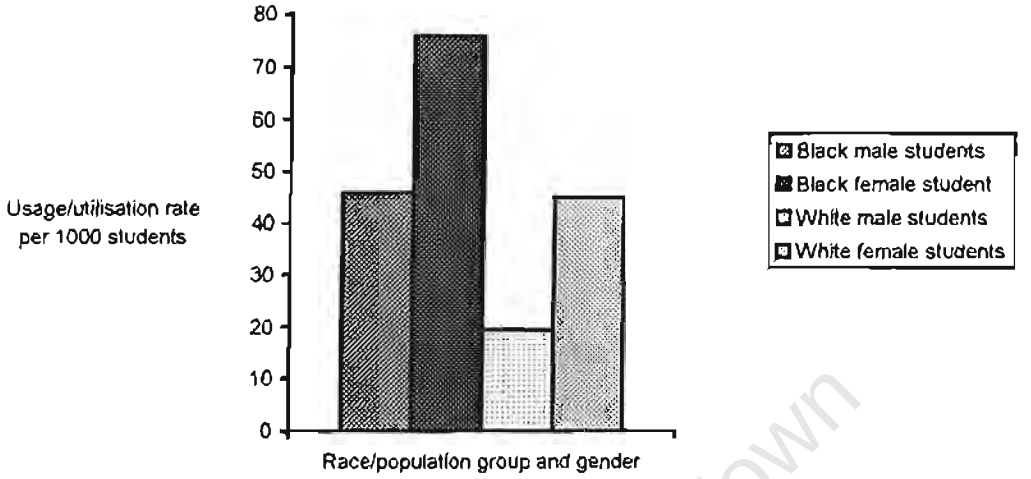
(b) Expected frequencies						
Race/population group[1] and gender	Observed frequency$_1$	Expected frequency$_1$	Difference between observed and expected frequency$_1$	Observed frequency$_3$	Expected frequency$_3$	Difference between observed and expected frequency$_3$
(a) Gender stratification						
Males						
Blacks (A, C, I)	200	124,2	+75,8 (+61,0)	4 354	4 429,8	-75,8 (-1,7%)
Whites	177	252,8	-75,8 (-30,0%)	9 096	9 020,2	+75,8 (+0,8%)
Subtotal	377	377,0	-	13 450	13 450,0	-

Females						
Blacks (A, C, I)	228	166,8	+61,2 (+36,7%)	3 005	3 066,2	-61,2 (-2,0%)
Whites	300	361,2	-61,2 (-16,9%)	6 701	6 639,8	+61,2 (+0,9%)
Subtotal	528	528,0	-	9 706	9 706,0	-
(b) Race/population group[1] stratification						
Blacks (A, C, I)						
Males	200	253,2	-53,2 (-21,0%)	4 354	4 300,8	+53,2 (+1,2%)
Females	228	174,8	+53,2 (+30,4%)	3 005	3 058,2	-53,2 (-1,7%)
Subtotal	428	428,0	-	7 359	7 359,0	-
Whites						
Males	177	274,7	-97,3 (-35,4%)	9 096	8 998.3	+97,7 (+1,1%)
Females	300	202,3	+97,7 (+48,3%)	6 701	6 798,7	-97,7 (-1,4%)
Subtotal	477	477,0	-	15 797	15 797,0	-

Number of missing responses = 27 for patients and 2 for the total student community.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
n_1 and $\%_1$ refer to patients.
Observed frequency$_1$ and expected frequency$_1$ refer to patients.
n_3 and $\%_3$ refer to the total student community.
Observed frequency$_3$ and expected frequency$_3$ refer to the total student community.

Figure 5.10 illustrates and Table 5.51 demonstrates that, for male students, Black (African, Coloured and Indian) students have a considerably higher usage/utilisation rate and, consequently, utilisation ratio than White students (by 135,4 and 134,0 per cent, respectively). This patient-specific finding, therefore, is compatible with Research Hypothesis IIa of the UCT-SHS study stratified by male gender. Likewise, the same race/population group-specific pattern relates to female students where the usage/utilisation rate and utilisation ratio are 69,4 and 68,7 per cent, respectively, higher for Black students. This patient-specific finding, therefore, is compatible with Research Hypothesis IIa of the UCT-SHS study stratified by female gender. For Black students, female students have a much higher usage/utilisation rate and, consequently, utilisation ratio than male students (by 65,4 and 65,8 per cent, respectively). This patient-specific finding, therefore, is compatible with Research Hypothesis Ia of the UCT-SHS study stratified by the race/population group of Black students. Similarly, the same gender-specific pattern relates to White students where the usage/utilisation rate and utilisation ratio are 129,7 and 130,0 per cent, respectively, higher for female students. This patient-specific finding, therefore, is compatible with Research Hypothesis Ia of the UCT-SHS study stratified by the race/population group of White students.

Figure 5.10 Usage/utilisation rate per 1 000 students in students presenting at the UCT-SHS-MHS (1991-1993) stratified by Black (African, Coloured and Indian) students versus White students and gender.



Refer to Table 5.51 for values of usage/utilisation rates.

Table 5.51 Usage/utilisation rate per 1 000 students and utilisation ratio in students presenting at the UCT-SHS-MHS (1991-1993) stratified by Black (African, Coloured and Indian) students versus White students and gender.

Race/population group[1] and gender	Usage/utilisation rate per 1 000 students	Deviation from mean usage/utilisation rate per 1 000 students	Utilisation ratio
Black (African, Coloured and Indian) male students	45,9	+6,8	1,17
Black (African, Coloured and Indian) female students	75,9	+36,8	1,94
White male students	19,5	-19,6	0,50
White female students	44,8	+5,7	1,15
Mean	39,1	-	1,00

[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.

– Clinical/diagnostic-specific data

A: Major diagnostic categories

– Gender stratification

Male student attendees

Table 5.52 demonstrates that, for all major diagnostic categories, Black (African, Coloured and Indian) male students have a generally considerably higher usage/utilisation (prevalence) rate and, consequently, utilisation (prevalence) ratio than White male students (by 95,0 and 94,8 per cent for affective disorder, by 120,8 and 119,2 per cent for adjustment disorder, by 159,4 and 158,2 per cent for V-codes, by 285,3 and 288,5 per cent for anxiety (neurotic) disorder, by 59,3 and 59,0 per cent for "other" disorders and by 134,3 and 132,9 per cent for total (combined) disorders). These clinical findings therefore are consistent with

Research Hypothesis IIa stratified by male gender for all major diagnostic categories employed in the UCT-SHS study.

Table 5.52 Usage/utilisation (prevalence) rate per 1 000 students and utilisation (prevalence) ratio for major diagnostic categories in students presenting at the UCT-SHS-MHS (1991-1993) stratified by Black (African, Coloured and Indian) male students (N=200) versus White male students (N=171).

(a) Affective disorder			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Blacks (A, C, I)	3,9	+1,3	1,50
Whites	2,0	-0,6	0,77
Mean	2,6	-	1,00
(b) Adjustment disorder			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Blacks (A, C, I)	11,7	+4,4	1,60
Whites	5,3	-2,0	0,73
Mean	7,3	-	1,00
(c) V-codes			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Blacks (A, C, I)	8,3	+3,5	1,73
Whites	3,2	-1,6	0,67
Mean	4,8	-	1,00
(d) Anxiety (neurotic) disorder			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Blacks (A, C, I)	13,1	+6,6	2,02
Whites	3,4	-3,1	0,52
Mean	6,5	-	1,00
(e) "Other" disorders			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Blacks (A, C, I)	9,4	+2,3	1,32
Whites	5,9	-1,2	0,83
Mean	7,1	-	1,00
(f) Total (combined) disorders			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Blacks (A, C, I)	46,4	+18,0	1,63
Whites	19,8	-8,6	0,70
Mean	28,4	-	1,00

Number of missing responses = unknown.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.

Female student attendees

Table 5.53 demonstrates that, for affective disorder, adjustment disorder, V-codes, anxiety (neurotic) disorder and total (combined) disorders, Black (African, Coloured and Indian) female students have a generally considerably higher usage/utilisation (prevalence) rate and, consequently, utilisation (prevalence) ratio than White female students (by 79,6 and 79,0 per cent for affective disorder, by 37,5 and 37,8 per cent for

adjustment disorder, by 175,5 and 175,4 per cent for V-codes, by 94,3 and 93,5 per cent for anxiety (neurotic) disorder and by 66,3 per cent each for total (combined) disorders). The only exception to this trend is "other" disorders, where the usage/utilisation (prevalence) rate and utilisation (prevalence) ratio are 81,3 per cent each higher for White female students. These clinical findings therefore are consistent with Research Hypothesis IIa stratified by female gender for affective disorder, adjustment disorder, V-codes, anxiety (neurotic) disorder and total (combined) disorders but are not consistent with Research Hypothesis IIa stratified by female gender for "other" disorders.

Table 5.53 Usage/utilisation (prevalence) rate per 1 000 students and utilisation (prevalence) ratio for major diagnostic categories in students presenting at the UCT-SHS-MHS (1991-1993) stratified by Black (African, Coloured and Indian) female students (N=228) versus White female students (N=300).

(a) Affective disorder			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Blacks (A, C, I)	9,7	+3,0	1,45
Whites	5,4	-1,3	0,81
Mean	6,7	-	1,00
(b) Adjustment disorder			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Blacks (A, C, I)	22,0	+4,2	1,24
Whites	16,0	-1,8	0,90
Mean	17,8	-	1,00
(c) V-codes			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Blacks (A, C, I)	27,0	+11,9	1,79
Whites	9,8	-5,3	0,65
Mean	15,1	-	1,00
(d) Anxiety (neurotic) disorder			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Blacks (A, C, I)	13,6	+4,5	1,49
Whites	7,0	-2,1	0,77
Mean	9,1	-	1,00
(e) "Other" disorders			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Blacks (A, C, I)	4,3	-2,4	0,64
Whites	7,8	+1,1	1,16
Mean	6,7	-	1,00
(f) Total (combined) disorders			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Blacks (A, C, I)	76,5	+21,1	1,38
Whites	46,0	-9,4	0,83
Mean	55,4	-	1,00

Number of missing responses = 27 for patients and 31 for diagnoses.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.

– Race/population group stratification

Black (African, Coloured and Indian) student attendees

Table 5.54 demonstrates that, for affective disorder, adjustment disorder, V-codes, anxiety (neurotic) disorder and total (combined) disorders, Black female students have a generally considerably higher usage/utilisation (prevalence) rate and, consequently, utilisation (prevalence) ratio than Black male students (by 148,7 and 148,4 per cent for affective disorder, by 88,0 and 86,5 per cent for adjustment disorder, by 225,3 and 226,9 per cent for V-codes, by 3,8 and 4,1 per cent for anxiety (neurotic) disorder and by 64,9 and 64,6 per cent for total (combined) disorders). The only exception to this trend is "other" disorders, where the usage/utilisation (prevalence) rate and utilisation (prevalence) ratio are both 118,6 per cent higher for Black male students. These clinical findings therefore are consistent with Research Hypothesis Ia stratified by Black race/population group for affective disorder, adjustment disorder, V-codes, anxiety (neurotic) disorder and total (combined) disorders but are not consistent with Research Hypothesis Ia stratified by Black race/population group for "other" disorders.

Table 5.54 Usage/utilisation (prevalence) rate per 1 000 students and utilisation (prevalence) ratio for major diagnostic categories in students presenting at the UCT-SHS-MHS (1991-1993) stratified by Black (African, Coloured and Indian) male students (N=200) versus Black (African, Coloured and Indian) female students (N=228).

(a) Affective disorder			
Gender	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Males	3,9	-2,4	0,62
Females	9,7	+3,4	1,54
Mean	6,3	–	1,00
(b) Adjustment disorder			
Gender	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Males	11,7	-4,2	0,74
Females	22,0	+6,1	1,38
Mean	15,9	-	1,00
(c) V-codes			
Gender	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Males	8,3	-7,6	0,52
Females	27,0	+11,1	1,70
Mean	15,9	-	1,00
(d) Anxiety (neurotic) disorder			
Gender	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Males	13,1	-0,2	0,98
Females	13,6	+0,3	1,02
Mean	13,3	-	1,00

(e) "Other" disorders			
Gender	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Males	9,4	+2,1	1,29
Females	4,3	-3,0	0,59
Mean	7,3	-	1,00
(f) Total (combined) disorders			
Gender	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Males	46,4	-12,3	0,79
Females	76,5	+17,8	1,30
Mean	58,7	-	1,00

Number of missing responses = 27 for patients and 31 for diagnoses.

White student attendees

Table 5.55 demonstrates that, for all major diagnostic categories, White female students have a generally considerably higher usage/utilisation (prevalence) rate and, consequently, utilisation (prevalence) ratio than White male students (by 170,0 and 169,5 per cent for affective disorder, by 201,9 per cent each for adjustment disorder, by 206,3 and 207,5 per cent for V-codes, by 105,9 and 107,2 per cent for anxiety (neurotic) disorder, by 32,2 and 31,8 per cent for "other" disorders and by 132,3 and 132,8 per cent for total (combined) disorders). These clinical findings therefore are consistent with Research Hypothesis Ia stratified by White race/population group for all major diagnostic categories employed in the UCT-SHS study.

Table 5.55 Usage/utilisation (prevalence) rate per 1 000 students and utilisation (prevalence) ratio for major diagnostic categories in students presenting at the UCT-SHS-MHS (1991-1993) stratified by White male students (N=228) versus White female students (N=300).

(a) Affective disorder			
Gender	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Males	2,0	-1,4	0,59
Females	5,4	+2,0	1,59
Mean	3,4	--	1,00
(b) Adjustment disorder			
Gender	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Males	5,3	-4,5	0,54
Females	16,0	+6,2	1,63
Mean	9,8	-	1,00
(c) V-codes			
Gender	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Males	3,2	-2,8	0,53
Females	9,8	+3,8	1,63
Mean	6,0	-	1,00

(d) Anxiety (neurotic) disorder			
Gender	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Males	3,4	-1,5	0,69
Females	7,0	+2,1	1,43
Mean	4,9	-	1,00
(e) "Other" disorders			
Gender	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Males	5,9	-0,8	0,88
Females	7,8	+1,1	1,16
Mean	6,7	-	1,00
(f) Total (combined) disorders			
Gender	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Males	19,8	-11,1	0,64
Females	46,0	+15,1	1,49
Mean	30,9	-	1,00

Number of missing responses = 27 for patients and 31 for diagnoses.

B: Individual V-codes

– Gender stratification

Male student attendees

Table 5.56 demonstrates that, for all individual V-codes, Black (African, Coloured and Indian) male students have a generally considerably higher usage/utilisation (prevalence) rate and, consequently, utilisation (prevalence) ratio than White male students (by 86,7 and 86,1 per cent for relationship problem, by 260,0 per cent each for family problem, by 366,7 and 365,1 per cent for complicated bereavement, by 100,0 per cent each for pre- and post-termination counselling for unplanned/unwanted pregnancy, by 200,0 and 198,4 per cent for academic problem and by 159,4 and 158,2 per cent for total (combined) V-codes. These clinical findings therefore are consistent with Research Hypothesis IIa stratified by male gender for all individual V-codes employed in the UCT-SHS study.

Table 5.56 Usage/utilisation (prevalence) rate per 1 000 students and utilisation (prevalence) ratio for individual V-codes in students presenting at the UCT-SHS-MHS (1991-1993) stratified by Black (African, Coloured and Indian) male students (N=200) versus White male students (N=177).

(a) Relationship problem			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Blacks (A, C, I)	2,8	+0,9	1,47
Whites	1,5	-0,4	0,79
Mean	1,9	-	1,00

(b) Family problem			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Blacks (A, C, I)	1,8	+0,8	1,80
Whites	0,5	-0,5	0,50
Mean	1,0	-	1,00
(c) Complicated bereavement			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Blacks (A, C, I)	1,4	+0,7	2,00
Whites	0,3	-0,4	0,43
Mean	0,7	-	1,00
(d) Pre- and post-termination counselling for unplanned/unwanted pregnancy			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Blacks (A, C, I)	0,2	+0,1	2,00
Whites	0,1	-0,0	1,00
Mean	0,1	-	1,00
(e) Academic problem			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Blacks (A, C, I)	2,1	+1,0	1,91
Whites	0,7	-0,4	0,64
Mean	1,1	-	1,00
(f) Total (combined) V-codes			
Race/population group[1]	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Blacks (A, C, I)	8,3	+3,5	1,73
Whites	3,2	-1,6	0,67
Mean	4,8	-	1,00

Number of missing responses =unknown.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.

Female student attendees

Table 5.57 demonstrates that, for all individual V-codes, Black (African, Coloured and Indian) female students have a generally considerably higher usage/utilisation (prevalence) rate and, consequently, utilisation (prevalence) ratio than White female students (by 232,4 and 231,0 per cent for relationship problem, by 114,3 and 113,5 per cent for family problem, by 107,7 and 108,3 per cent for complicated bereavement, by 253,3 and 250,0 per cent for pre- and post-termination counselling for unplanned/unwanted pregnancy, by 75,0 per cent each for academic problem and by 175,5 and 175,4 per cent for total (combined) V-codes. These clinical findings therefore are consistent with Research Hypothesis IIa stratified by female gender for all individual V-codes employed in the UCT-SHS study.

Table 5.57 Usage/utilisation (prevalence) rate per 1 000 students and utilisation (prevalence) ratio for individual V-codes in students presenting at the UCT-SHS-MHS (1991-1993) stratified by Black (African, Coloured and Indian) female students (N=228) versus White female students (N=300).

(a) Relationship problem			
Race/population group[1]	Usage/utilisation (prevalence) rate per 1 000 students	Deviation from mean usage/utilisation (prevalence) rate per 1 000 students	Utilisation (prevalence) ratio
Blacks (A, C, I)	12,3	+5,9	1,92
Whites	3,7	-2,7	0,58
Mean	6,4	-	1,00
(b) Family problem			
Race/population group[1]	Usage/utilisation (prevalence) rate per 1 000 students	Deviation from mean usage/utilisation (prevalence) rate per 1 000 students	Utilisation (prevalence) ratio
Blacks (A, C, I)	6,0	+2,2	1,58
Whites	2,8	-1,0	0,74
Mean	3,8	-	1,00
(c) Complicated bereavement			
Race/population group[1]	Usage/utilisation (prevalence) rate per 1 000 students	Deviation from mean usage/utilisation (prevalence) rate per 1 000 students	Utilisation (prevalence) ratio
Blacks (A, C, I)	2,7	+0,9	1,50
Whites	1,3	-0,5	0,72
Mean	1,8	-	1,00
(d) Pre- and post-termination counselling for unplanned/unwanted pregnancy			
Race/population group[1]	Usage/utilisation (prevalence) rate per 1 000 students	Deviation from mean usage/utilisation (prevalence) rate per 1 000 students	Utilisation (prevalence) ratio
Blacks (A, C, I)	5,3	+2,6	1,96
Whites	1,5	-1,2	0,56
Mean	2,7	-	1,00
(e) Academic problem			
Race/population group[1]	Usage/utilisation (prevalence) rate per 1 000 students	Deviation from mean usage/utilisation (prevalence) rate per 1 000 students	Utilisation (prevalence) ratio
Blacks (A, C, I)	0,7	+0,2	1,40
Whites	0,4	-0,1	0,80
Mean	0,5	-	1,00
(f) Total (combined) V-codes			
Race/population group[1]	Usage/utilisation (prevalence) rate per 1 000 students	Deviation from mean usage/utilisation (prevalence) rate per 1 000 students	Utilisation (prevalence) ratio
Blacks (A, C, I)	27,0	+11,9	1,79
Whites	9,8	-5,3	0,65
Mean	15,1	-	1,00

Number of missing responses =unknown.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.

B: Race/population group stratification

Black (African, Coloured and Indian) student attendees

Table 5.58 demonstrates that, for relationship problem, family problem, complicated bereavement, pre- and post termination counselling for unplanned/unwanted pregnancy and total (combined) V-codes Black female students have a generally considerably higher usage/utilisation (prevalence) rate and, consequently, utilisation (prevalence) ratio than Black male students (by 339,3 and 338,1 per cent for relationship problem, by 233,3 and 235,3 per cent for family problem, by 92,9 and 91,9 per cent for complicated bereavement, by

2 550,0 and 2 455,6 per cent for pre- and post-termination counselling for unplanned/unwanted pregnancy and by 225,3 and 226,9 per cent for total (combined) V-codes. The only exception to this trend is academic problem where the usage/utilisation (prevalence) rate and utilisation (prevalence) ratio are 200,0 and 197,9 per cent higher for Black male students. These clinical findings therefore are consistent with Research Hypothesis Ia stratified by Black race/population group for relationship problem, family problem, complicated bereavement, pre- and post termination counselling for unplanned/unwanted pregnancy and total (combined) V-codes but are not consistent with Research Hypothesis Ia stratified by Black race/population group for academic problem.

Table 5.58 Usage/utilisation (prevalence) rate per 1 000 students and utilisation (prevalence) ratio for individual V-codes in students presenting at the UCT-SHS-MHS (1991-1993) stratified by Black (African, Coloured and Indian) male students (N=200) versus Black (African, Coloured and Indian) female students (N=228).

(a) Relationship problem			
Gender	Usage/utilisation (prevalence) rate per 1 000 students	Deviation from mean usage/utilisation (prevalence) rate per 1 000 students	Utilisation (prevalence) ratio
Males	2,8	-3,9	0,42
Females	12,3	+5,6	1,84
Mean	6,7	-	1,00
(b) Family problem			
Gender	Usage/utilisation (prevalence) rate per 1 000 students	Deviation from mean usage/utilisation (prevalence) rate per 1 000 students	Utilisation (prevalence) ratio
Males	1,8	-1,7	0,51
Females	6,0	+2,5	1,71
Mean	3,5	-	1,00
(c) Complicated bereavement			
Gender	Usage/utilisation (prevalence) rate per 1 000 students	Deviation from mean usage/utilisation (prevalence) rate per 1 000 students	Utilisation (prevalence) ratio
Males	1,4	-0,5	0,74
Females	2,7	+0,8	1,42
Mean	1,9	-	1,00
(d) Pre- and post-termination counselling for unplanned/unwanted pregnancy			
Gender	Usage/utilisation (prevalence) rate per 1 000 students	Deviation from mean usage/utilisation (prevalence) rate per 1 000 students	Utilisation (prevalence) ratio
Males	0,2	-2,1	0,09
Females	5,3	+3,0	2,30
Mean	2,3	-	1,00
(e) Academic problem			
Gender	Usage/utilisation (prevalence) rate per 1 000 students	Deviation from mean usage/utilisation (prevalence) rate per 1 000 students	Utilisation (prevalence) ratio
Males	2,1	+0,6	1,40
Females	0,7	-0,8	0,47
Mean	1,5	-	1,00
(f) Total (combined) V-codes			
Gender	Usage/utilisation (prevalence) rate per 1 000 students	Deviation from mean usage/utilisation (prevalence) rate per 1 000 students	Utilisation (prevalence) ratio
Males	8,3	-7,6	0,52
Females	27,0	+11,13	1,70
Mean	15,9	-	1,00

Number of missing responses =unknown.

White student attendees

Table 5.59 demonstrates that, for relationship problem, family problem, complicated bereavement, pre- and post termination counselling for unplanned/unwanted pregnancy and total (combined) V-codes White female students have a generally considerably higher usage/utilisation (prevalence) rate and, consequently, utilisation (prevalence) ratio than White male students (by 146,7 per cent each for relationship problem, by 460,0 and 466,7 per cent for family problem, by 333,3 and 328,9 per cent for complicated bereavement, by 1 400,0 and 1 428,6 per cent for pre- and post termination counselling for unplanned/unwanted pregnancy and by 206,3 and 207,5 per cent for total (combined) V-codes). The only exception to this trend is academic problem where the usage/utilisation (prevalence) rate and utilisation (prevalence) ratio are 75,0 and 74,6 per cent higher for White male students. These clinical findings therefore are consistent with Research Hypothesis Ia stratified by White race/population group for relationship problem, family problem, complicated bereavement, pre- and post termination counselling for unplanned/unwanted pregnancy and total (combined) V-codes but are not consistent with Research Hypothesis Ia stratified by White race/population group for academic problem.

Table 5.59 Usage/utilisation (prevalence) rate per 1 000 students and utilisation (prevalence) ratio for individual V-codes in students presenting at the UCT-SHS-MHS (1991-1993) stratified by White male students (N=228) versus White female students (N=300).

(a) Relationship problem			
Gender	Usage/utilisation (prevalence) rate per 1 000 students	Deviation from mean usage/utilisation (prevalence) rate per 1 000 students	Utilisation (prevalence) ratio
Males	1,5	-1,0	0,60
Females	3,7	+1,2	1,48
Mean	2,5	-	1,00
(b) Family problem			
Gender	Usage/utilisation (prevalence) rate per 1 000 students	Deviation from mean usage/utilisation (prevalence) rate per 1 000 students	Utilisation (prevalence) ratio
Males	0,5	-1,0	0,33
Females	2,8	+1,3	1,87
Mean	1,5	-	1,00
(c) Complicated bereavement			
Gender	Usage/utilisation (prevalence) rate per 1 000 students	Deviation from mean usage/utilisation (prevalence) rate per 1 000 students	Utilisation (prevalence) ratio
Males	0,3	-0,5	0,38
Females	1,3	+0,5	1,63
Mean	0,8	-	1,00
(d) Pre- and post-termination counselling for unplanned/unwanted pregnancy			
Gender	Usage/utilisation (prevalence) rate per 1 000 students	Deviation from mean usage/utilisation (prevalence) rate per 1 000 students	Utilisation (prevalence) ratio
Males	0,1	-0,6	0,14
Females	1,5	+0,8	2,14
Mean	0,7	-	1,00
(e) Academic problem			
Gender	Usage/utilisation (prevalence) rate per 1 000 students	Deviation from mean usage/utilisation (prevalence) rate per 1 000 students	Utilisation (prevalence) ratio
Males	0,7	+0,1	1,17
Females	0,4	-0,2	0,67
Mean	0,6	-	1,00

(f) Total (combined) V-codes			
Gender	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Males	3,2	-2,8	0,53
Females	9,8	+3,8	1,63
Mean	6,0	-	1,00

Number of missing responses =unknown.

(iv) Cross-race/population group and gender format

- Black (African, Coloured and Indian) male versus White female students

A: Patient-specific data

Table 5.60 demonstrates that White female students are more likely than Black male students to present at the UCT-SHS-MHS than attend the UCT-SHS with purely medical complaints as reflected by a statistically significant (p=0,000) positive OR for patients versus controls which corresponds to a likelihood ratio ($\%_1$:$\%_2$) of 1,285. In fact, White female students are 17,1 per cent overrepresented (with a standardised residual of +2,7) and Black male students 17,9 per cent underrepresented (with a standardised residual of -2,8) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0.

However, the results in Table 5.61 suggest that Black male students are not more likely than White female students to present at the UCT-SHS-MHS as reflected by a statistically insignificant OR for patients versus total student community which corresponds to a likelihood ratio ($\%_1$:$\%_3$) of 1,015. Here Black male students are 1,5 per cent overrepresented (with a standardised residual of +0,2) and White female students 1,0 per cent underrepresented (with a standardised residual of –0,2) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0. These findings therefore confirm Research Hypothesis Ia but reject Research Hypothesis IIa for Objective 2 of the UCT-SHS study and reject Research Hypothesis Ia but confirm Research Hypothesis IIa for Objective 3 of the UCT-SHS study.

Table 5.60 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of controls (N=1 924) stratified by Black (African, Coloured and Indian) male students versus White female students.

(a) Unadjusted ORs and χ2 tests								
Race/population group[1] and gender	n_1	$\%_1$	n_2	$\%_2$	**Unadjusted OR (with 95% CI)**	**Df**	χ^2	ρ
Black (A, C, I) males	200	40,0	512	53,3				
White females	300	60,0	449	46,7				
Total	500	100,0	961	100,0	-	-	-	-

(b) Expected frequencies						
Race/population group[1] and gender	Observed frequency$_1$	Expected frequency$_1$	Difference between observed and expected frequency$_1$	Observed frequency$_2$	Expected frequency$_2$	Difference between observed and expected frequency$_2$
Black (A, C, I) males	200	243,7	-43,7 (-17,9%)	512	468,3	+43,7 (+9,3%)
White females	300	256,3	+43,7 (+17,1%)	449	492,7	-43,7 (-8,9%)
Total	500	500,0	-	961	961,0	-

Number of missing responses = 27 for patients and 5 for controls.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
n_1 and $\%_1$ refer to patients.
Observed frequency$_1$ and expected frequency$_1$ refer to patients.
n_2 and $\%_2$ refer to controls.
Observed frequency$_2$ and expected frequency$_2$ refer to controls.

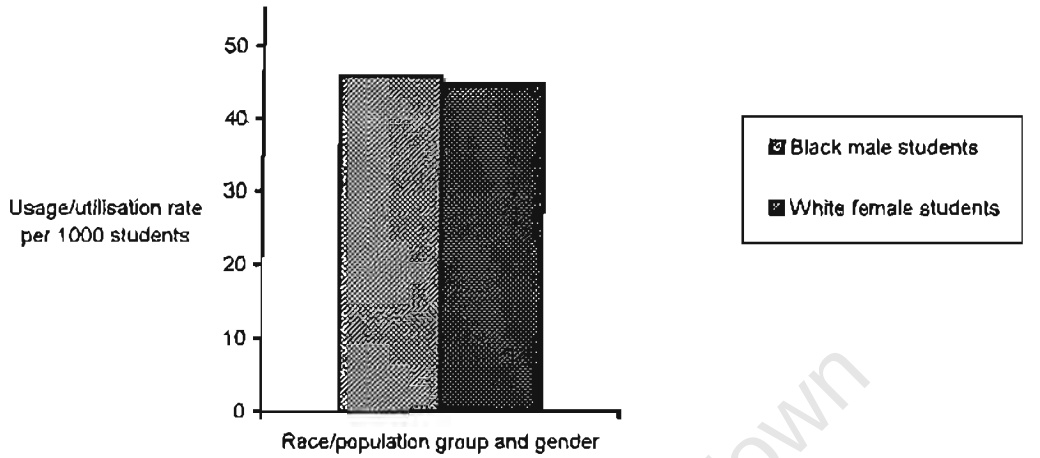
Table 5.61 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of total student community (N=23 158) stratified by Black (African, Coloured and Indian) male students versus White female students.

(a) Unadjusted ORs and $\chi 2$ tests								
Race/population group[1] and gender	n_1	$\%_1$	n_3	$\%_3$	Unadjusted OR (with 95% CI)	Df	χ^2	p
Black (A, C, I) males	200	40,0	4 354	39,4				
White females	300	60,0	6 701	60,6				
Total	500	100,0	11 055	100,0	-	-	-	-
(b) Expected frequencies								
Race/population group[1] and gender	Observed frequency$_1$	Expected frequency$_1$	Difference between observed and expected frequency$_1$	Observed frequency$_3$	Expected frequency$_3$	Difference between observed and expected frequency$_3$		
Black (A, C, I) males	200	197,1	+2,9 (+1,5%)	4 354	4 356,9	-2,9 (-0,1%)		
White females	300	302,9	-2,9 (-1,0%)	6 701	6 698,1	+2,9 (+0,0%)		
Total	500	500,0	-	11 055	11 055,0	-		

Number of missing responses = 27 for patients and 5 for controls.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
n_1 and $\%_1$ refer to patients.
Observed frequency$_1$ and expected frequency$_1$ refer to patients.
n_3 and $\%_3$ refer to the total student community.
Observed frequency$_3$ and expected frequency$_3$ refer to the total student community.

Figure 5.11 illustrates and Table 5.62 demonstrates that Black (African, Coloured and Indian) male students have a slightly higher usage/utilisation rate and, consequently, utilisation ratio than White female students (by 2,5 and 1,7 per cent, respectively). This patient-specific finding, therefore, is not compatible with Research Hypothesis Ia of the UCT-SHS study but is compatible with Research Hypothesis IIa of the UCT-SHS study.

Figure 5.11 Usage/utilisation rate per 1 000 students in students presenting at the UCT-SHS-MHS (1991-1993) stratified by Black (African, Coloured and Indian) male students versus White female students.



Refer to Table 5.62 for values of usage/utilisation rates.

Table 5.62 Usage/utilisation rate per 1 000 students and utilisation ratio in students presenting at the UCT-SHS-MHS (1991-1993) stratified by Black (African, Coloured and Indian) male students versus White female students.

Race/population group[1]	Usage/utilisation rate per 1 000 students	Deviation from mean usage/utilisation rate per 1 000 students	Utilisation ratio
Black (A, C, I) male students	45,9	+6,8	1,17
White female students	44,8	+5,7	1,15
Mean	39,1	-	1,00

[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.

B: Clinical/diagnostic-specific data

Major diagnostic categories

Tables 5.52 and 5.53 previously demonstrate that, for anxiety (neurotic) disorder, "other" disorder and total (combined) disorders, Black (African, Coloured and Indian) male students have a higher usage/utilisation (prevalence) rate than White female students (by 87,1 per cent for anxiety (neurotic) disorder, by 20,5 per cent for "other" disorders and by 0,9 per cent for total (combined) disorders). The exceptions to this trend are affective disorder, adjustment disorder and V-codes where the usage/utilisation (prevalence) rates are 38,5; 36,8 and 18,1 per cent, respectively, higher for White female students. These clinical findings therefore are consistent with Research Hypothesis Ia for affective disorder, adjustment disorder and V-codes but are not consistent with Research Hypothesis Ia for anxiety (neurotic) disorder, "other" disorder and total (combined) disorders and are consistent with Research Hypothesis IIa for anxiety (neurotic) disorder, "other" disorders and total (combined)

disorders but are not consistent with Research Hypothesis IIa for affective disorder, adjustment disorder and V-codes.

Individual V-codes

Tables 5.54 and 5.55 previously demonstrate that, for complicated bereavement and academic problem, Black male students have a higher usage/utilisation (prevalence) rate than White female students (by 7,7 per cent for complicated bereavement and by 425,0 per cent for academic problem). The exceptions to this trend are relationship problem, family problem, pre- and post-termination counselling for unplanned/unwanted pregnancy and total (combined) V-codes where the usage/utilisation (prevalence) rates are 32,1; 55,6; 650,0 and 18,1 per cent, respectively, higher for White female students. These clinical findings therefore are consistent with Research Hypothesis Ia for relationship problem, family problem, pre- and post-termination counselling for unplanned/unwanted pregnancy and total (combined) V-codes but are not consistent with Research Hypothesis Ia for complicated bereavement and academic problem and are consistent with Research Hypothesis IIa for complicated bereavement and academic problem but are not consistent with Research Hypothesis IIa for relationship problem, family problem, pre- and post-termination counselling for unplanned/unwanted pregnancy and total (combined) V-codes.

– Black (African, Coloured and Indian) female versus White male students

A: Patient-specific data

Table 5.63 demonstrates that Black female students are more likely than White male students to present at the UCT-SHS-MHS than attend the UCT-SHS with purely medical complaints as reflected by a statistically significant (p=0,000) positive OR for patients versus controls which corresponds to a likelihood ratio ($\%_1$:$\%_2$) of 1,470. In fact, Black female students are 29,0 per cent overrepresented (with a standardised residual of +3,8) and White male students 22,4 per cent underrepresented (with a standardised residual of -3,4) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0.

In addition, the results in Table 5.64 suggest that Black female students are more likely than White male students to present at the UCT-SHS-MHS as reflected by a statistically significant (p=0,000) positive OR for patients versus total student community which corresponds to a likelihood ratio ($\%_1$:$\%_3$) of 2,270. Here Black female students are 117,8 per cent overrepresented (with a standardised residual of +12,1) and White male students 41,1 per cent underrepresented (with a standardised residual of -7,1) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0. These findings therefore confirm Research Hypothesis Ia and Research Hypothesis IIa for Objectives 2 and 3 of the UCT-SHS study.

Table 5.63 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of controls (N=1 924) stratified by Black (African, Coloured and Indian) female students versus White male students.

(a) Unadjusted ORs and $\chi 2$ tests								
Race/population group[1] and gender	**n_1**	**$\%_1$**	**n_2**	**$\%_2$**	**Unadjusted OR (with 95% CI)**	**Df**	**χ^2**	**p**
Black (A, C, I) females	228	56,3	367	38,3				
White males	177	43,7	591	61,7				
Total	405	100,0	958	100,0	-	-	-	-

(b) Expected frequencies						
Race/population group[1] and gender	**Observed frequency$_1$**	**Expected frequency$_1$**	**Difference between observed and expected frequency$_1$**	**Observed frequency$_2$**	**Expected frequency$_2$**	**Difference between observed and expected frequency$_2$**
Black (A, C, I) females	228	176,8	+51,2 (+29,0%)	367	418,2	-51,2 (-12,2%)
White males	177	228,2	-51,2 (-22,4%)	591	53,8	+51,2 (+9,5%)
Total	405	405,0	-	958	958,0	-

Number of missing responses = 27 for patients and 5 for controls.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
n_1 and $\%_1$ refer to patients.
Observed frequency$_1$ and expected frequency$_1$ refer to patients.
n_2 and $\%_2$ refer to controls.
Observed frequency$_2$ and expected frequency$_2$ refer to controls.

Table 5.64 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of total student community (N=23 158) stratified by Black (African, Coloured and Indian) female students versus White male students.

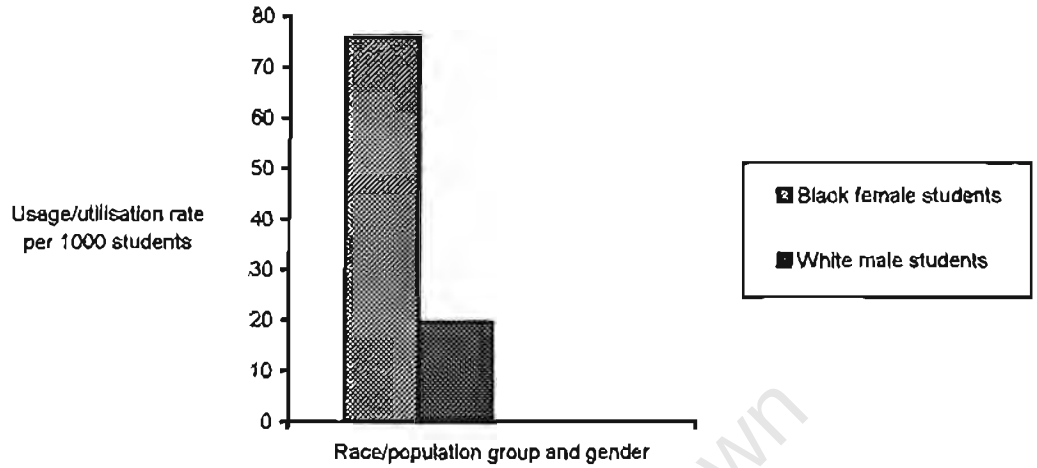
(a) Unadjusted ORs and $\chi 2$ tests								
Race/population group[1] and gender	**n_1**	**$\%_1$**	**n_3**	**$\%_3$**	**Unadjusted OR (with 95% CI)**	**Df**	**χ^2**	**p**
Black (A, C, I) females	228	56,3	3 005	24,8				
White males	177	43,7	9 096	75,2				
Total	405	100,0	12 101	100,0	-	-	-	-

(b) Expected frequencies						
Race/population group[1] and gender	**Observed frequency$_1$**	**Expected frequency$_1$**	**Difference between observed and expected frequency$_1$**	**Observed frequency$_3$**	**Expected frequency$_3$**	**Difference between observed and expected frequency$_3$**
Black (A, C, I) females	228	104,7	+123,3 (+117,8%)	3 005	3 128,3	-123,3 (-3,9%)
White males	177	300,3	-123,3 (-41,1%)	9 096	8 972,7	+123,3 (+1,4%)
Total	405	405,0	-	12 101	12 101,0	-

Number of missing responses = 27 for patients and 5 for controls.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
n_1 and $\%_1$ refer to patients.
Observed frequency$_1$ and expected frequency$_1$ refer to patients.
n_3 and $\%_3$ refer to the total student community.
Observed frequency$_3$ and expected frequency$_3$ refer to the total student community.

Figure 5.12 illustrates and Table 5.65 demonstrates that Black (African, Coloured and Indian) female students have a considerably higher usage/utilisation rate and, consequently, utilisation ratio than White male students (by 289,2 and 288,0 per cent, respectively). This patient-specific finding, therefore, is compatible with both Research Hypothesis Ia and Research Hypothesis IIa of the UCT-SHS study.

Figure 5.12 Usage/utilisation rate per 1 000 students in students presenting at the UCT-SHS-MHS (1991-1993) stratified by Black (African, Coloured and Indian) female students versus White male students.



Refer to Table 5.65 for values of usage/utilisation rates.

Table 5.65 Usage/utilisation rate per 1 000 students and utilisation ratio in students presenting at the UCT-SHS-MHS (1991-1993) stratified by Black (African, Coloured and Indian) female students versus White male students.

Race/population group[1]	Usage/utilisation rate per 1 000 students	Deviation from mean usage/utilisation rate per 1 000 students	Utilisation ratio
Black (A, C, I) female students	75,9	+36,8	1,94
White male students	19,5	-19,6	0,50
Mean	39,1	-	1,00

[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.

B: Clinical/diagnostic-specific data

Major diagnostic categories

Tables 5.52 and 5.53 previously demonstrate that, for affective disorder, adjustment disorder, V-codes, anxiety (neurotic) disorder and total (combined) disorders, Black (African, Coloured and Indian) female students have a generally considerably higher usage/utilisation (prevalence) rate than White male students (by 385,0 per cent for affective disorder, by 315,1 per cent for adjustment disorder, by 743,8 per cent for V-codes, by 300,0 per cent for anxiety (neurotic) disorder and by 286,.4 per cent for total (combined) disorders). The only exception to this trend is "other" disorder where the usage/utilisation (prevalence) rate is 37,2 per cent higher for White male students. These clinical findings therefore are consistent with Research Hypothesis Ia and Research Hypothesis IIa for affective disorder, adjustment disorder, V-codes, anxiety (neurotic) disorder and total (combined) disorders but are not consistent with Research Hypothesis Ia and Research Hypothesis IIa for "other" disorders.

Individual V-codes

Tables 5.54 and 5.55 previously demonstrate that, for all individual V-codes, Black female students have a generally considerably higher usage/utilisation (prevalence) rate than White male students (by 720,0 per cent for relationship problem, by 1 100,0 per cent for family problem, by 800,0 per cent for complicated bereavement, by 5 200,0 per cent for pre- and post-termination counselling for unplanned/unwanted pregnancy, by 0,9 per cent for academic problem and by 462,5 per cent for total (combined) V-codes. These clinical findings therefore are consistent with Research Hypothesis Ia and Research Hypothesis IIa for all individual V-codes employed in the UCT-SHS study.

(c) **Objective 4 (number of consultations)**

Research Hypothesis Ib of the UCT-SHS study is as follows:

Female students are likely to require more consultations for mental disorders at the UCT-SHS-MHS than males.

Research Hypothesis IIb of the UCT-SHS study is as follows:

Black students are likely to require more consultations for mental disorders at the UCT-SHS-MHS than their White peers.

In this objective Research Hypothesis Ib and Research Hypothesis IIb are either confirmed or rejected according to the mean number of consultations for UCT-SHS-MHS attendees (patients).

(i) **Non-abridged format**

Table 5.66 demonstrates that 3 441 individual consultations were made by 905 documented patients attending the UCT-SHS-MHS from 1991 to 1993 – a mean of 3,8 consultations per patient with a range of 1 to 29 consultations. White females followed by White males, not surprisingly, were responsible for the majority of consultations at the UCT-SHS-MHS. White females and Coloured males required (or accepted) the longest duration of psychotherapeutic intervention (a mean of 4,3 consultations per patient) while Black males, on the other hand, required (or accepted) the shortest duration of therapy (a mean of 3,0 consultations per patient). The following gender-specific differences were noted: (1) the mean number of consultations per student and the total number of consultations was higher for Black (African) female students than male students (by 30,0 and 6,1 per cent, respectively); (2) the mean number of consultations per student is higher for Coloured male students than female students (by 4,9 per cent) while the total number of consultations is higher for Coloured female students than male students (by 124,5 per cent); (3) the mean number of consultations per student is higher for Indian male students than female students (by 9,4 per cent) while the total number of consultations is higher for Indian female students than male students (by 26,4 per cent) and

(4) the mean number of consultations per student and the total number of consultations is higher for White female students than male students (by 20,6 and 69,5 per cent, respectively). Table 5.67 demonstrates by means of a factorial ANOVA that gender (Type I SS only) produces a statistically significant (p=0,001) result while neither race/population group nor race/population group and gender combined were responsible for a significant difference in the number of consultations required by the student.

Table 5.66 Frequency, percentages, mean number and range of consultations (N=3 441) in students presenting at the UCT-SHS-MHS (1991-1993) stratified by race/population group and gender.

Race/population group[1] and gender	n	%	No. of cons mean	SD	Range
Africans					
Males	445	48,5	3,0	2,8	1 to 15 consultations
Females	472	51,5	3,9	4,2	1 to 29 consultations
Coloureds					
Males	155	30,8	4,3	4,6	1 to 26 consultations
Females	348	69,2	4,1	3,9	1 to 21 consultations
Indians					
Males	53	44,2	3,5	2,9	1 to 9 consultations
Females	67	55,8	3,2	2,7	1 to 10 consultations
Whites					
Males	617	32,5	3,5	3,0	1 to 15 consultations
Females	1 284	67,5	4,3	3,5	1 to 23 consultations

Number of missing responses = 27 for patients.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.

Table 5.67 ANOVA summary table for the mean number of consultations by race/population group and gender in students presenting at the UCT-SHS-MHS (1991-1993).

Race/population group[1] and gender	Df	Sum of square	Mean square	F-ratio	Prob > F
Regression model	7	213,7	30,5	2,54	0,014[Sig]
Error	898	10 769,5	12,0		
Corrected total	905	10 983,2			

Factor	Df	Type I SS	Mean square	F-ratio	Prob > F
Gender	1	123,9	123,9	10,31	0,001[Sig]
Race/population group[1]	3	58,6	19,5	1,62	0,182[NS]
Gender and race/population group[1]	3	31,1	10,4	0,86	0,459[NS]

Factor	Df	Type III SS	Mean square	F-ratio	Prob > F
Gender	1	7,7	7,7	0,64	0,424[NS]
Race/population group[1]	3	63,6	21,2	1,76	0,152[NS]
Gender and race/population group[1]	3	31,2	10,4	0,86	0,459[NS]

$R^2 = 0,019$
[1]Race/population group is classified according to the now repealed population Registration Act of 1951.

(ii) Abridged format

Table 5.68 demonstrates that White females followed by White males were responsible for the majority of consultations at the UCT-SHS-MHS. White females required (or accepted) the longest duration of psychotherapeutic intervention (a mean of 4,3 consultations per patient) while Black males, on the other hand, required (or accepted) the shortest duration of therapy (a mean of 3,3 consultations per patient). The following race/population group- and gender-specific differences were noted: (1) the mean number of consultations per student is higher for White male students than Black male students (by 6,1 per cent) while

the total number of consultations is higher for Black male students than White male students (by 5,8 per cent) and (2) the mean number of consultations per student and the total number of consultations was higher for White female students than Black female students (by 10,3 and 44,8 per cent, respectively). As the ANOVA previously appearing in the non-abridged format for race/population group and gender (Table 5.67) produced a non-significant (Df = 3; Prob >F = 0,459) result, no t-test has been performed (invalid procedure) for this particular format of the combined race/population group-specific variable. This finding therefore rejects Research Hypothesis Ib and Research Hypothesis IIb for Objective 4 of the UCT-SHS study.

Table 5.68 Frequency, percentages, mean number and range of consultations (N=3 441) in students presenting at the UCT-SHS-MHS (1991-1993) stratified by Black (African, Coloured and Indian) students versus White students and gender.

Race/population group[1] and gender	n	%	No. of cons		Range
			mean	SD	
Males					
Blacks (A,C,I)	653	51,4	3,3	3,1	1 to 26 consultations
Whites	617	48,6	3,5	3,0	1 to 15 consultations
Females					
Blacks (A,C,I)	887	40,9	3,9	3,4	1 to 29 consultations
Whites	1 284	59,1	4,.3	3,5	1 to 23 consultations

Number of missing responses = 27 for patients.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.

5.1.2.4 Age

(a) Objective 1 (attendees) – Descriptive data

(i) Non-abridged format

Table 5.69 demonstrates that 21 year old students were responsible for the greatest number of attendees at the UCT-SHS-MHS from 1991 to 1993 followed by 22 year old, 20 year old, 19 year old and 23 year old students (all greater than or equal to 80 attendees).

Table 5.69 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) stratified by age (in years).

Age (in years)	n	%
15	1	0,1
16	3	0,3
17	13	1,4
18	57	6,3
19	104	11,5
20	106	11,7
21	141	15,6
22	121	13,4
23	80	8,8
24	68	7,5
25	55	6,1
26	29	3,2
27	24	2,7
28	15	1,7
29	14	1,5

30	13	1,4
31	12	1,3
32	15	1,7
33	4	0,4
34	8	0,9
35	1	0,1
36	3	0,3
37	1	0,1
38	4	0,4
39	3	0,3
40	2	0,2
>40	8	0,9
Total	905	100,0

Number of missing responses = 27.

(ii) Abridged format

Table 5.70 demonstrates that students who are 20-24 years of age were responsible for the greatest number of attendees at the UCT-SHS-MHS from 1991 to 1993 followed by students greater than or equal to 25 years of age (both greater than 200 attendees).

Table 5.70 Frequency and percentage of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) stratified by World Health Organisation (WHO) designated age categories.

Age (in years)	n	%
15-19	178	19,7
20-24	516	57,0
≥25	211	23,3
Total	905	100,0

Number of missing responses = 27.

(iii) Highly abridged format

– Patient-specific data

Table 5.71 demonstrates that there was a greater number of students who are less than 25 years of age than students who are greater than or equal to 25 years of age (by 228,9 per cent) who attended the UCT-SHS-MHS from 1991 to 1993.

Table 5.71 Frequency and percentage of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) stratified by students less than 25 years of age versus students greater than or equal to 25 years of age.

Age (in years)	n	%
<25	694	76,7
≥25	211	23,3
Total	905	100,0

Number of missing responses = 27.

– Clinical/diagnostic-specific data

A: Major diagnostic categories

Table 5.72 demonstrates that students less than 25 years of age were diagnosed as presenting at the UCT-SHS-MHS with a greater number of all major diagnostic categories than students greater than or equal to 25 years of age (by 254,5 per cent for affective disorders, by 253,3 per cent for adjustment disorders, by 153,3 per cent for V-codes, by 200,0 per cent for anxiety (neurotic) disorders, by 333,3 per cent for "other" disorders and by 225,9 per cent for total (combined) disorders, respectively) – however, none of these major diagnostic categories produced a statistically significant difference. For students less than 25 years of age, adjustment disorder was the most common presenting major diagnostic category while adjustment disorder and V-codes were the joint most frequently coded major diagnostic categories for students greater than or equal to 25 years of age. However, neither of the major diagnostic categories produced a statistically significant result in favour of either students less than 25 years of age or students greater than or equal to 25 years of age.

Table 5.72 Major diagnostic categories of students less than 25 years of age (N=674) versus students greater than or equal to 25 years of age (N=211) presenting at the UCT-SHS-MHS (1991-1993).

Major diagnostic category	<25		≥25		Unadjusted OR (with 95% CI)	Df	χ^2	p
	n	%	n	%				
Affective disorder	78	11,1	22	10,2	1,1 (0,7 - 1,9)	1	0,1	$0,712^{NS}$
Adjustment disorder	212	30,1	60	27,8	1,1 (0,8 - 1,6)	1	0,4	$0,510^{NS}$
V-codes	152	21,6	60	27,8	0,7 (0,5 - 1,0)	1	3,6	$0,059^{NS}$
Anxiety (neurotic) disorder	132	18,8	44	20,4	0,9 (0,6 - 1,4)	1	0,3	$0,596^{NS}$
"Other" disorders	130	18,5	30	13,9	1,4 (0,9 - 2,2)	1	2,4	$0,121^{NS}$
Total	704	100,0	216	100,0	-	4	5,4	$0,250^{NS}$

Number of missing responses = 27 for patients and 31 for diagnoses.

B: Individual V-codes

Table 5.73 demonstrates that students less than 25 years of age were diagnosed as presenting at the UCT-SHS-MHS with a greater number of all individual V-codes than students greater than or equal to 25 years of age (by 114,3 per cent relationship problems, by 425,0 per cent for family problems, by 60,0 per cent for complicated bereavement, by 266,7 per cent for pre- and post-termination counselling for unplanned/unwanted pregnancies, by 50,0 per cent for academic problems and by 153,3 per cent for total (combined) V-codes, respectively) – however, only family problem produced a statistically significant (p=0,027) difference. For students less than 25 years of age, relationship problem was the most common presenting individual V-code as well as the most frequently coded individual V-code for students greater than or equal to 25 years of age. Only family problem produced a statistically significant (p=0,027) result in favour of students less than 25 years of age.

Table 5.73 Individual V-codes of students less than 25 years of age (N=694) versus students greater than or equal to 25 years of age (N=211) presenting at the UCT-SHS-MHS (1991-1993).

Individual V-code	<25		≥25		Unadjusted OR (with 95% CI)	Df	χ^2	p
	n	%	n	%				
Relationship problem	60	39,5	60	39,5	0,8 (0,4 - 1,4)	1	0,9	$0,338^{NS}$
Family problem	42	27,6	42	27,6	2,5 (1,0 - 6,2)	1	4,9	$0,027^{Sig}$
Complicated bereavement	16	10,5	16	10,5	0,6 (0,2 - 1,5)	1	1,5	$0,220^{NS}$
Unplanned/unwanted pregnancy	22	14,5	22	14,5	1,5 (0,6 - 4,5)	1	0,8	$0,386^{NS}$
Academic problem	12	7,9	12	7,9	0,6 (0,2 - 1,6)	1	1,5	$0,222^{NS}$
Total V-codes	152	100,0	152	100,0	-	4	7,6	$0,108^{Sig}$

Number of missing responses = unknown.

(b) Objective 2 (patients versus controls) and Objective 3 (patients versus the total student community)

Research Hypothesis IIIa of the UCT-SHS study is as follows:

> *Older (students (whose age is greater than 25 years) are more likely to present with mental disorders at the UCT-SHS-MHS than their younger peers.*

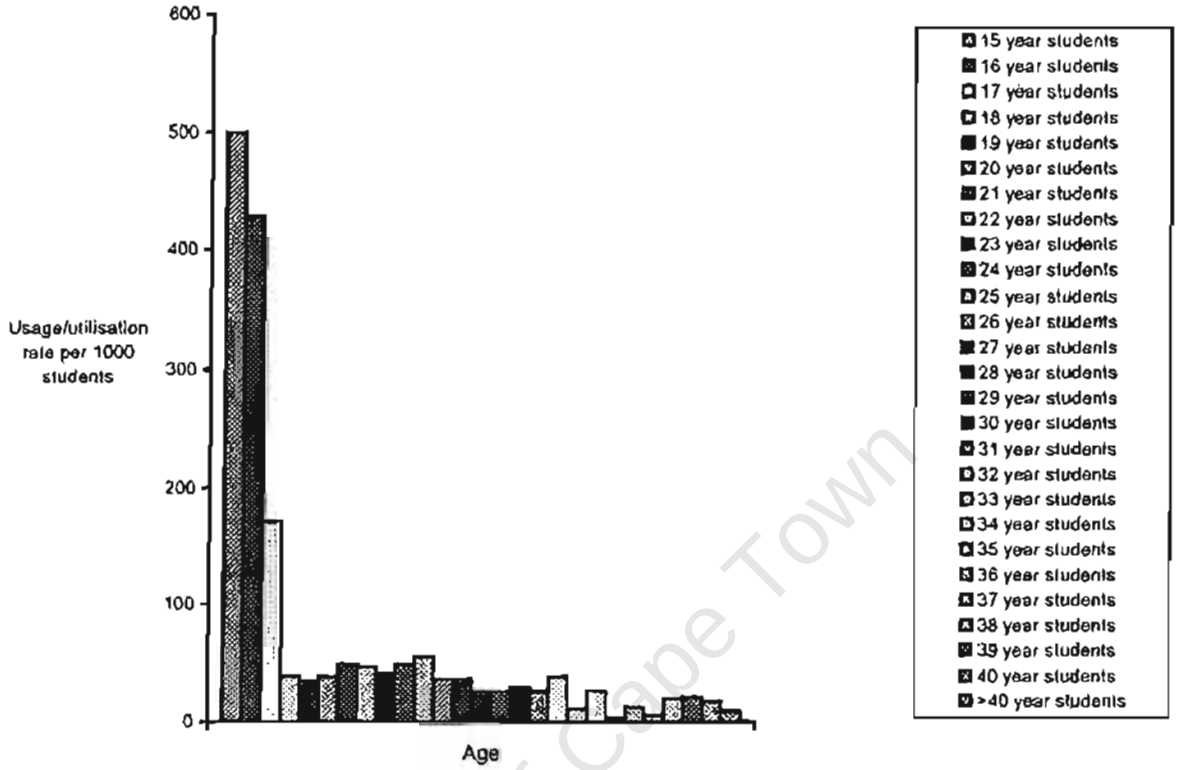
In these objectives Research Hypothesis IIIa is either confirmed or rejected according to the unadjusted odds ratio or χ^2 test (p-value) for UCT-SHS-MHS attendees (patients) versus UCT-SHS medical attendees (controls) [Objective 2] or to additional usage/utilisation rates per 1 000 students and utilisation ratios for patients versus registered UCT students (the total student community) [Objective 3].

(i) Non-abridged format

Unadjusted ORs for patients versus controls or patients versus the total student community where the individual subcategory is compared to the remaining subcategories by means of contingency (2x2) tables have not been employed for this particular format of the age-specific variable.

Figure 5.13 illustrates and Table 5.74 demonstrates that 15 year old students were responsible for the highest usage/utilisation rate and, consequently, utilisation ratio followed by 16 and 17 year old students (all greater than 150,0 attendees per 1 000 students) with 25, 24, 21, 22 and 23 year old students forming a smaller peak (all greater than 40,0 attendees per 1 000 students).

Figure 5.13 Usage/utilisation rate per 1 000 students in students presenting at the UCT-SHS-MHS (1991-1993) stratified by age (in years).



Refer to Table 5.74 for values of usage/utilisation rates.

Table 5.74 Usage/utilisation rate per 1 000 students and utilisation ratio in students presenting at the UCT-SHS-MHS (1991-1993) stratified by age (in years).

Age (in years)	Usage/utilisation rate per 1 000 students	Deviation from mean usage/utilisation rate per 1 000 students	Utilisation ratio
15 year students	500,0	+460,9	12,79
16 year students	428,6	+389,5	10,96
17 year students	171,1	+132,0	4,38
18 year students	39,6	+0,5	1,01
19 year students	35,2	-3,9	0,90
20 year students	39,5	+0,4	1,01
21 year students	49,8	+10,7	1,27
22 year students	47,8	+8,7	1,22
23 year students	42,4	+3,3	1,08
24 year students	49,9	+10,8	1,28
25 year students	56,0	+16,9	1,43
26 year students	37,5	-1,6	0,96
27 year students	37,9	-1,2	0,97
28 year students	26,1	-13,0	0,67
29 year students	26,4	-12,7	0,68
30 year students	29,9	-9,2	0,76
31 year students	27,0	-12,1	0,69
32 year students	39,4	+0,3	1,01
33 year students	11,7	-27,4	0,30
34 year students	27,0	-12,1	0,69
35 year students	3,7	-35,4	0,09

36 year students	13,4	-25,7	0,34
37 year students	5,6	-33,5	0,14
38 year students	20,4	-18,7	0,52
39 year students	21,3	-17,8	0,54
40 year students	17,4	-21,7	0,45
>40 year students	9,3	-29,8	0,24
Mean	39,1	-	1,00

(ii) Abridged format ("Conventional" format)

Table 5.75 demonstrates that no World Health Organisation (WHO) designated age category is statistically more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS – although the greater than or equal to 25 years of age subcategory did record the lowest p-value (p=0,069). In addition, the age-specific variable with its three subcategories did not produce a statistically significant result.

However, Table 5.76 demonstrates that only students who are 20-24 years of age are statistically (p=0,000) more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than their representation of the student community would suggest which corresponds to a likelihood ratio ($\%_1:\%_3$) of 1,175. In fact, these students are 16,8 per cent overrepresented (with a standardised residual of +3,5) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0. Conversely, only students greater than or equal to 25 years of age are statistically (p=0,000) less likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than their representation of the student community would suggest which corresponds to a likelihood ratio ($\%_1:\%_3$) of 0,724. In fact, these students are 26,8 per cent underrepresented (with a standardised residual of -4,5) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0. In addition, the age-specific variable with its three subcategories did produce a statistically significant (p=0,000) result.

Table 5.75 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of controls (N=1 924) stratified by World Health Organisation (WHO) designated age categories.

Age (in years)	n_1	$\%_1$	n_2	$\%_2$	Unadjusted OR (with 95% CI)	Df	χ^2	p
15-19	178	19,7	403	21,0	0,9 (0,8 - 1,1)	1	0,7	$0,414^{NS}$
20-24	516	57,0	1 126	58,7	0,9 (0,8 - 1,1)	1	0,7	$0,404^{NS}$
≥25	211	23,3	390	203	1,3 (1,0 - 1,4)	1	3,3	$0,069^{NS}$
Total	905	100,0	1 919	100,0	-	2	3,4	$0,182^{NS}$

Number of missing responses = 27 for patients and 5 for controls.
n_1 and $\%_1$ refer to patients.
n_2 and $\%_2$ refer to controls.

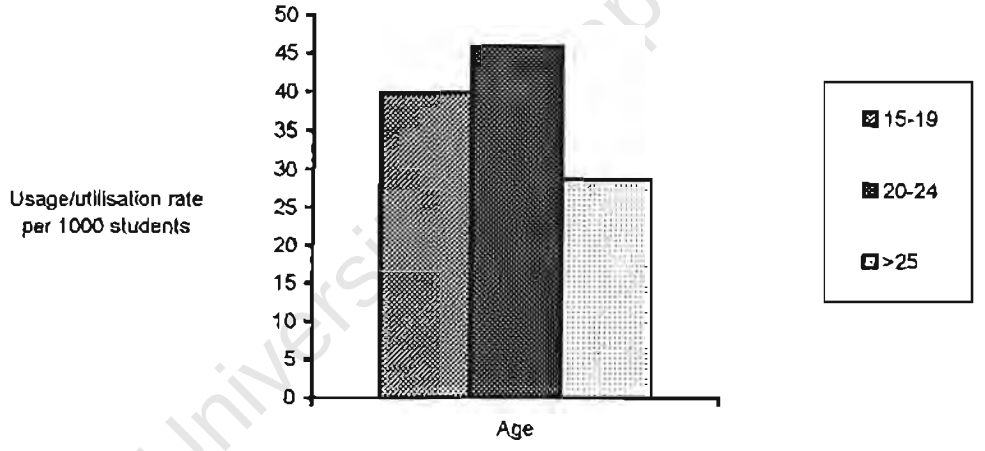
Table 5.76 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of total student community (N=23 158) stratified by World Health Organisation (WHO) designated age categories.

Age (in years)	n_1	$\%_1$	n_3	$\%_3$	Unadjusted OR (with 95% CI)	Df	χ^2	p
15-19	178	19,7	4 480	19,3	1,0 (0,9 - 1,2)	1	0,1	$0,802^{NS}$
20-24	516	57,0	11 302	48,8	1,4 (1,2 - 1,6)	1	25,4	$0,000^{Sig}$
≥25	211	23,3	7 375	31,8	0,6 (0,6 - 0,8)	1	31,6	$0,000^{Sig}$
Total	905	100,0	23 157	100,0	-	2	34,6	$0,000^{Sig}$

Number of missing responses = 27 for patients and 1 for total student community.
n_1 and $\%_1$ refer to patients.
n_3 and $\%_3$ refer to the total student community.

Figure 5.14 illustrates and Table 5.77 demonstrates that students who are 20-24 years of age have the highest usage/utilisation rate and, consequently, utilisation ratio followed by 15 to 19 year old students (both greater than 38,0 attendees per 1 000 students).

Figure 5.14 Usage/utilisation rate per 1 000 students in students presenting at the UCT-SHS-MHS (1991-1993) stratified by World Health Organisation (WHO) designated age categories.



Refer to Table 5.77 for values of usage/utilisation rates.

Table 5.77 Usage/utilisation rate per 1 000 students and utilisation ratio in students presenting at the UCT-SHS-MHS (1991-1993) stratified by World Health Organisation (WHO) designated age categories.

Age (in years)	Usage/utilisation rate per 1 000 students	Deviation from mean usage/utilisation rate per 1 000 students	Utilisation ratio
15-19	39,7	+0,6	1,02
20-24	45,7	+6,6	1,17
≥25	28,6	-10,5	0,73
Mean	39,1	-	1,00

(iii) Abridged format ("Matrix" format)

– Overview

The layout adopted has been to compare the individual subcategory to the remaining subcategories (by means of contingency (2x2) tables for data fulfilling Objectives 2 and 3) – the initial subheading in Tables 5.78 and 5.79 will detail students who are 15-19 years of age versus students who are 20-24 years of age and students greater than or equal to 25 years of age – the subject of the Research Hypothesis being tested for this variable, respectively, while the final subheading in Tables 5.78 and 5.79 will detail students who are 20-24 years of age versus students greater than or equal to 25 years of age. This standardised format will prevent the repetition of reverse comparisons.

– Results

Table 5.78 demonstrates that students who are 15-19 years of age are only slightly less likely than students who are greater than and equal to 25 years of age to present at the UCT-SHS-MHS than attend the UCT-SHS with purely medical complaints as reflected by a statistically insignificant OR for patients versus controls. In fact, students who are 15-19 years of age are 6,7 per cent underrepresented (with a standardised residual of -0,9) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0. (These OR values, in turn, for 15-19 year old versus greater than and equal to 25 year old students are somewhat lower than those recorded for 15-19 year old versus 20-24 year old students (by 0,2), thereby suggesting the existence of a negative gradient between 20-24 year old and greater than and equal to 25 year old students (relative to 15-19 year old students) in making use of university mental health services. However, the results in Table 5.79 suggest that students who are 15-19 years of age are more likely than students who are greater than and equal to 25 years of age to present at the UCT-SHS-MHS as reflected by a statistically significant (p=0,001) positive OR for patients versus total student community. In fact, these students are 12,8 per cent overrepresented (with a standardised residual of +2,0) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0. (These OR values for 15-19 year old versus greater than and equal to 25 year old students are greatly in excess of those recorded for 15-19 year old versus 20-24 year old students (by 0,5), thereby strongly suggesting the existence of a positive gradient between 20-24 year old and greater than and equal to 25 year old students (relative to 15-19 year old students) relative to UCT-SHS-MHS attendance.)

Table 5.78 demonstrates that students who are 20-24 years of age are minimally less likely than students who are greater than or equal to 25 years of age to present at the UCT-SHS-MHS than attend the UCT-SHS with purely medical complaints as reflected by a statistically insignificant OR for patients versus controls. In fact, students who are 20-24 years of age are 8,3 per cent underrepresented (with a standardised residual of -1,2) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0. However, the results in Table 5.79 suggest that students who are 20-24

years of age are more likely than students who are greater than or equal to 25 years of age to present at the UCT-SHS-MHS as reflected by a statistically significant (p=0,000) positive OR for patients versus total student community. In fact, students who are 20-24 years of age are 26,5 per cent overrepresented (with a standardised residual of +4,5) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0.

Table 5.78 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of controls (N=1 924) stratified by World Health Organisation (WHO) designated age categories according to "matrix" format.

Age (in years)	n_1	$\%_1$	n_2	$\%_2$	Unadjusted OR (with 95% CI)	Df	χ^2	p
15-19								
20-24	516	74,4	1 126	73,6	1,0 (0,8 - 1,2)	1	0,1	$0,725^{NS}$
≥25	211	54,2	390	49,2	0,8 (0,6 - 1,0)	1	2,7	$0,102^{NS}$
20-24								
≥25	211	29,0	390	25,7	0,8 (0,7 - 1,0)	1	2,7	$0,099^{NS}$

Number of missing responses = 27 for patients and 5 for controls.
n_1 and $\%_1$ refer to patients.
n_2 and $\%_2$ refer to controls.

Table 5.79 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of total student community (N=23 158) stratified by World Health Organisation (WHO) designated age categories according to "matrix" format.

Age (in years)	n_1	$\%_1$	n_3	$\%_3$	Unadjusted OR (with 95% CIs)	Df	χ^2	p
15-19								
20-24	516	74,4	11 302	71,6	0,9 (0,7 - 1,0)	1	2,7	$0,102^{NS}$
≥25	211	54,2	7 375	62,2	1,4 (1,1 - 1,7)	1	10,9	$0,001^{Sig}$
20-24								
≥25	211	29,0	7 375	39,5	1,6 (1,4 - 1,9)	1	34,7	$0,000^{Sig}$

Number of missing responses = 27 for patients and 1 for total student community.
n_1 and $\%_1$ refer to patients.
n_3 and $\%_3$ refer to the total student community.

(iv) Highly abridged format

– Patient-specific data

Table 5.80 demonstrates that students who are greater than or equal to 25 years of age appear only slightly more likely than students who are less than 25 years of age to present at the UCT-SHS-MHS than attend the UCT-SHS with purely medical complaints as reflected by a statistically insignificant OR for patients versus controls which corresponds to a likelihood ratio ($\%_1$:$\%_2$) of 1,148. In fact, patients who are greater than or equal to 25 years of age are 9,6 per cent overrepresented (with a standardised residual of +1,3) and patients who are less than 25 years of age are 2,6 per cent underrepresented (with a standardised residual of -0,7) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0. Adjusted ORs demonstrate that the statistically insignificant (p=0,069)

relationship between patients and controls is NOT preserved when adjusting for both gender (p=0,001) and gender and race/population group combined (p=0,001).

However, the results in Table 5.81 suggest that students who are greater than or equal to 25 years of age are less likely than students who are less than 25 years of age to present at the UCT-SHS-MHS as reflected by a statistically significant (p=0,000) negative OR for patients versus total student community which corresponds to a likelihood ratio ($\%_1$:$\%_3$) of 0,733. Here students who are less than 25 years of age are 12,0 per cent overrepresented (with a standardised residual of +3,0) and students who are greater than or equal to 25 years of age are 26,0 per cent underrepresented (with a standardised residual of -4,4) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0. Adjusted ORs demonstrate that the statistically significant (p=0,000) relationship between patients and the total student community is preserved when adjusting for both gender and gender and race/population group combined. These findings therefore confirm Research Hypothesis IIIa for Objective 2 and reject Research Hypothesis IIIa for Objective 3 of the UCT-SHS study.

Table 5.80 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of controls (N=1 924) stratified by students less than 25 years of age versus students greater than or equal to 25 years of age.

(a) Unadjusted ORs and $\chi 2$ tests

Age (in years)	n_1	$\%_1$	n_2	$\%_2$	Unadjusted OR (with 95% CI)	Df	χ^2	p
<25	694	76,7	1 529	79,7	1,3 (1,0 - 1,4)	1	3,3	$0,069^{NS}$
≥25	211	23,3	390	20,3	-	-	-	-
Total	905	100,0	1 919	100,0	-	-	-	-

(b) Expected frequencies

Age (in years)	Observed frequency$_1$	Expected frequency$_1$	Difference between observed and expected frequency$_1$	Observed frequency$_2$	Expected frequency$_2$	Difference between observed and expected frequency$_2$
<25	694	712,4	-18,4 (-2,6%)	1 529	1 510,6	+18,4 (+1,2%)
≥25	211	192,6	+18,4 (+9,6%)	390	408,4	-18,4 (-4,6%)
Total	905	905,0	-	1 919	1 919,0	-

(c) Adjusted ORs

(i) By gender

Variable	SE	Adjusted OR (with 95% CI)	Df	χ^2	Prob >χ^2
Intercept	0,222	[5,842]	1	63,2	$0,000^{Sig}$
Age	0,009	1,0 (1,0 - 1,0)	1	10,6	$0,001^{Sig}$
Model fit	-	-	2	72,3	$0,000^{Sig}$

(ii) By gender and race/population group

Variable	SE	Adjusted OR (with 95% CI)	Df	χ^2	Prob >χ^2
Intercept	0,300	[4,970]	1	28,7	$0,000^{Sig}$
Age	0,009	1,0 (1,0 - 1,0)	1	11,8	$0,001^{Sig}$
Model fit	-	-	5	86,9	$0,000^{Sig}$

Number of missing responses = 27 for patients and 5 for controls.
n_1 and $\%_1$ refer to patients.
Observed frequency$_1$ and expected frequency$_1$ refer to patients.
n_2 and $\%_2$ refer to controls.
Observed frequency$_2$ and expected frequency$_2$ refer to controls.

Table 5.81 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of the total student community (N=23 158) stratified by students less than 25 years of age versus students greater than or equal to 25 years of age.

(a) Unadjusted ORs and $\chi 2$ tests

Age (in years)	n_1	$\%_1$	n_3	$\%_3$	Unadjusted OR (with 95% CI)	Df	χ^2	p
<25	694	76,7	15 782	68,2	1,6 (1,3 - 1,8)	1	31,6	$0,000^{Sig}$
≥25	211	23,3	7 375	31,8	-	-	-	-
Total	905	100,0	23 157	100,0	-	-	-	-

(b) Expected frequencies

Age (in years)	Observed frequency$_1$	Expected frequency$_1$	Difference between observed and expected frequency$_1$	Observed frequency$_3$	Expected frequency$_3$	Difference between observed and expected frequency$_3$
<25	694	619,7	+74,3 (+12,0%)	15 782	15 856,3	-74,3 (-0,5%)
≥25	211	285,3	-74,3 (-26,0%)	7 375	7 300,7	+74,3 (+1,0%)
Total	905	905,0	-	23 157	23 157,0	-

(c) Adjusted ORs

(i) By gender

Variable	SE	Adjusted OR (with 95% CI)	Df	χ^2	Prob $>\chi^2$
Intercept	0,163	[13,028]	1	247,8	$0,000^{Sig}$
Age	0,007	1,0 (1,0 - 1,0)	1	38,0	$0,000^{Sig}$
Model fit	-	-	2	147,8	$0,000^{Sig}$

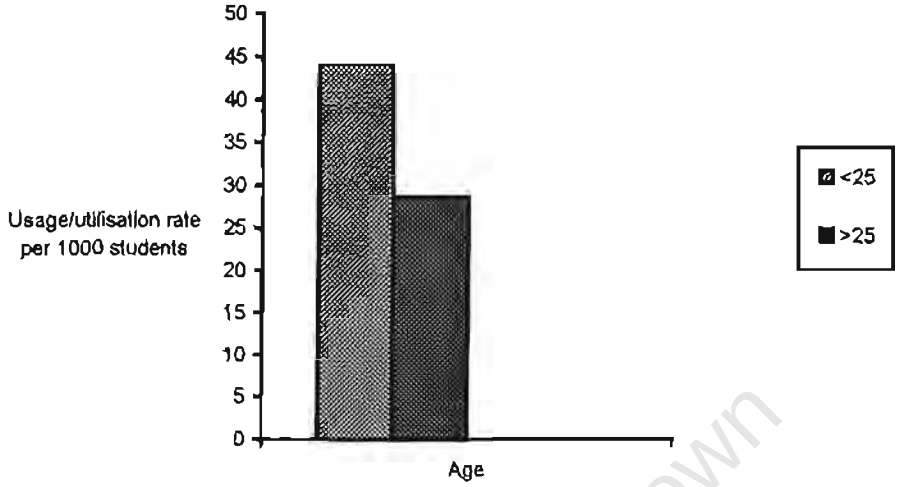
(ii) By gender and race/population group

Variable	SE	Adjusted OR (with 95% CI)	Df	χ^2	Prob $>\chi^2$
Intercept	0,228	[14,914]	1	140,4	$0,000^{Sig}$
Age	0,007	1,0 (1,0 - 1,0)	1	39,2	$0,000^{Sig}$
Model fit	-	-	5	324,4	$0,000^{Sig}$

Number of missing responses = 27 for patients and 1 for total student community.
n_1 and $\%_1$ refer to patients.
Observed frequency$_1$ and expected frequency$_1$ refer to patients.
n_3 and $\%_3$ refer to the total student community.
Observed frequency$_3$ and expected frequency$_3$ refer to the total student community.

Figure 5.15 illustrates and Table 5.82 demonstrates that students who are less than 25 years of age have a much higher usage/utilisation rate and, consequently, utilisation ratio than students who are greater than or equal to 25 years of age (by 53,8 and 54,8 per cent, respectively). This patient-specific finding, therefore, is not compatible with Research Hypothesis IIIa of the UCT-SHS study.

Figure 5.15 Usage/utilisation rate per 1 000 students in students presenting at the UCT-SHS-MHS (1991-1993) stratified by students less than 25 years of age versus students greater than or equal to 25 years of age.



Refer to Table 5.82 for values of usage/utilisation rates.

Table 5.82 Usage/utilisation rate per 1 000 students and utilisation ratio in students presenting at the UCT-SHS-MHS (1991-1993) stratified by students less than 25 years of age versus students greater than or equal to 25 years of age.

Age (in years)	Usage/utilisation rate per 1 000 students	Deviation from mean usage/utilisation rate per 1 000 students	Utilisation ratio
<25	44,0	+4,9	1,13
≥25	28,6	-10,5	0,73
Mean	39,1	-	1,00

– Clinical/diagnostic-specific data

A: Major diagnostic categories

Table 5.83 demonstrates that, for all major diagnostic categories, students less than 25 years of age have a generally considerably higher usage/utilisation (prevalence) rate and, consequently, utilisation (prevalence) ratio than students greater than or equal to 25 years of age (by 63,3 and 62,9 per cent for affective disorder, by 65,4 and 65,7 per cent for adjustment disorder, by 18,5 and 18,2 per cent for V-codes, by 40,0 and 40,5 per cent for anxiety (neurotic) disorder, by 100,0 and 101,7 per cent for "other" disorders and by 52,2 and 51,4 per cent for total (combined) disorders). These clinical findings therefore are not consistent with Research Hypothesis IIIa for all major diagnostic categories employed in the UCT-SHS study.

Table 5.83 Usage/utilisation (prevalence) rate per 1 000 students and utilisation (prevalence) ratio for major diagnostic categories in students presenting at the UCT-SHS-MHS (1991-1993) stratified by students less than 25 years of age versus students greater than or equal to 25 years of age.

(a) Affective disorder			
Age	Usage/utilisation (prevalence) rate per 1 000 students	Deviation from mean usage/utilisation (prevalence) rate per 1 000 students	Utilisation (prevalence) ratio
<25	4,9	+0,6	1,14
≥25	3,0	-1,3	0,70
Mean	4,3	-	1,00
(b) Adjustment disorder			
Age	Usage/utilisation (prevalence) rate per 1 000 students	Deviation from mean usage/utilisation (prevalence) rate per 1 000 students	Utilisation (prevalence) ratio
<25	13,4	+1,8	1,16
≥25	8,1	-3,5	0,70
Mean	11,6	-	1,00
(c) V-codes			
Age	Usage/utilisation (prevalence) rate per 1 000 students	Deviation from mean usage/utilisation (prevalence) rate per 1 000 students	Utilisation (prevalence) ratio
<25	9,6	+0,4	1,04
≥25	8,1	-1,1	0,88
Mean	9,2	-	1,00
(d) Anxiety (neurotic) disorder			
Age	Usage/utilisation (prevalence) rate per 1 000 students	Deviation from mean usage/utilisation (prevalence) rate per 1 000 students	Utilisation (prevalence) ratio
<25	8,4	+0,8	1,11
≥25	6,0	-1,6	0,79
Mean	7,6	-	1,00
(e) "Other" disorders			
Age	Usage/utilisation (prevalence) rate per 1 000 students	Deviation from mean usage/utilisation (prevalence) rate per 1 000 students	Utilisation (prevalence) ratio
<25	8,2	+1,3	1,19
≥25	4,1	-2,8	0,59
Mean	6,9	-	1,00
(f) Total (combined) disorders			
Age	Usage/utilisation (prevalence) rate per 1 000 students	Deviation from mean usage/utilisation (prevalence) rate per 1 000 students	Utilisation (prevalence) ratio
<25	44,6	+4,9	1,12
≥25	29,3	-10,4	0,74
Mean	39,7	-	1,00

Number of missing responses = 27 for patients and 31 for diagnoses.

B: Individual V-codes

Table 5.84 demonstrates that, for relationship problem, family problem, pre- and post-termination counselling for unplanned/unwanted pregnancy and total (combined) V-codes, students less than 25 years of age have a generally considerably higher usage/utilisation (prevalence) rate and, consequently, utilisation (prevalence) ratio than students greater than or equal to 25 years of age (by 0,1 and 0,0 per cent for relationship problem, by 145,5 and 146,0 per cent for family problem, by 75,0 and 74,6 per cent for pre- and post-termination counselling for unplanned/unwanted pregnancy and by 18,5 and 18,2 per cent for total (combined) V-codes. The two exceptions to this trend are complicated bereavement and academic problem

where the usage/utilisation (prevalence) rates and utilisation (prevalence) ratios are 40,0 and 39,6 per cent, respectively, for the former V-code and 37,5 and 37,1 per cent, respectively, for the latter V-code higher for students greater than or equal to 25 years of age. These clinical findings therefore are not consistent with Research Hypothesis IIIa for relationship problem, family problem, pre- and post-termination counselling for unplanned/unwanted pregnancy and total (combined) V-codes but are consistent with Research Hypothesis IIIa for bereavement and academic problem.

Table 5.84 Usage/utilisation (prevalence) rate per 1 000 students and utilisation (prevalence) ratio for individual V-codes in students presenting at the UCT-SHS-MHS (1991-1993) stratified by students less than 25 years of age versus students greater than or equal to 25 years of age.

(a) Relationship problem			
Age	Usage/utilisation (prevalence) rate per 1 000 students	Deviation from mean usage/utilisation (prevalence) rate per 1 000 students	Utilisation (prevalence) ratio
<25	3,8	+0,0	1,00
≥25	3,8	+0,0	1,00
Mean	3,8	-	1,00
(b) Family problem			
Age	Usage/utilisation (prevalence) rate per 1 000 students	Deviation from mean usage/utilisation (prevalence) rate per 1 000 students	Utilisation (prevalence) ratio
<25	2,7	+0,5	1,23
≥25	1,1	-1,1	0,50
Mean	2,2	-	1,00
(c) Complicated bereavement			
Age	Usage/utilisation (prevalence) rate per 1 000 students	Deviation from mean usage/utilisation (prevalence) rate per 1 000 students	Utilisation (prevalence) ratio
<25	1,0	-0,1	0,91
≥25	1,4	+0,3	1,27
Mean	1,1	-	1,00
(d) Pre- and post-termination counselling for unplanned/unwanted pregnancy			
Age	Usage/utilisation (prevalence) rate per 1 000 students	Deviation from mean usage/utilisation (prevalence) rate per 1 000 students	Utilisation (prevalence) ratio
<25	1,4	+0,2	1,17
≥25	0,8	-0,4	0,67
Mean	1,2	-	1,00
(e) Academic problem			
Age	Usage/utilisation (prevalence) rate per 1 000 students	Deviation from mean usage/utilisation (prevalence) rate per 1 000 students	Utilisation (prevalence) ratio
<25	0,8	-0,1	0,89
≥25	1,1	+0,2	1,22
Mean	0,9	-	1,00
(f) Total (combined) V-codes			
Age	Usage/utilisation (prevalence) rate per 1 000 students	Deviation from mean usage/utilisation (prevalence) rate per 1 000 students	Utilisation (prevalence) ratio
<25	9,6	+0,4	1,04
≥25	8,1	-1,1	0,88
Mean	9,2	-	1,00

Number of missing responses = unknown

(v) Mean ages format

Table 5.85 demonstrates that, for gender, male students have a greater mean age than female students who present at the UCT-SHS-MHS or who attend the UCT-SHS with purely medical complaints (by 4,9 and 4,6 per cent, respectively). For race/population group, African students followed by Indian students have the highest mean age for UCT-SHS-MHS attendees (both greater than 23,0 years) while African students followed by Coloured students have the highest mean age for medical controls (both greater than 22,0 years). For race/population group and gender combined, Indian males followed by African males, White males and African females have the highest mean age for students who present at the UCT-SHS-MHS (all greater than 23,0 years) while African males followed by Coloured males, African females and White males have the highest mean age for students who attend the UCT-SHS with purely medical complaints (all greater than 22,0 years). Table 5.86 demonstrates by means of a factorial ANOVA that patients versus controls (p=0,007), patient gender (p=0,000) and patient race/population group (p=0,000) produce statistically significant results for the mean age of student attendees.

Table 5.85 Frequency, mean age (with standard deviations) and range (minimum and maximum ages) of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency, mean age (with standard deviations) and range (minimum and maximum ages) of controls (N=1 919) stratified by gender, race/population group and race/population group and gender combined.

(a) Unadjusted ORs and $\chi 2$ tests								
Gender	n_1	**Age**		**Range$_1$**	n_2	**Age**		**Range$_2$**
		mean$_1$	**SD$_1$**			**mean$_2$**	**SD$_2$**	
Males	377	23,5	5,3	17 to 75 years	1 103	22,8	4,4	17 to 63 years
Females	528	22,4	4,2	15 to 45 years	816	21,8	3,8	17 to 55 years
Total	905	22,8	4,7	15 to 75 years	1 919	22,4	4,1	17 to 63 years
(b) Race/population group								
Race/population group[1]	n_1	**Age**		**Range$_1$**	n_2	**Age**		**Range$_2$**
		mean$_1$	**SD$_1$**			**mean$_2$**	**SD$_2$**	
Africans	271	23,5	4,7	15 to 45 years	656	23,4	4,6	17 to 51 years
Coloureds	121	22,3	3,7	17 to 44 years	156	22,1	4,3	17 to 54 years
Indians	36	23,3	5,4	17 to 44 years	67	21,5	2,5	18 to 29 years
Whites	477	22,5	4,8	16 to 75 years	1 040	21,9	3,8	17 to 63 years
Total	905	22,8	4,7	15 to 75 years	1 919	22,4	4,1	17 to 63 years
(c) Race/population group and gender								
Race/population group[1] and gender	n_1	**Age**		**Range$_1$**	n_2	**Age**		**Range$_2$**
		mean$_1$	**SD$_1$**			**mean$_2$**	**SD$_2$**	
African males	149	23,8	4,4	17 to 40 years	403	23,7	4,8	17 to 51 years
African females	122	23,2	5,2	15 to 45 years	253	22,8	4,3	17 to 43 years
Coloured males	36	22,8	4,8	18 to 44 years	63	23,4	5,6	17 to 54 years
Coloured females	85	22,1	3,2	17 to 32 years	93	21,2	2,8	18 to 34 years
Indian males	15	24,3	6,2	17 to 44 years	46	21,6	2,7	18 to 29 years
Indian females	21	22,5	4,7	18 to 41 years	21	21,4	1,9	18 to 25 years
White males	177	23,3	6,1	17 to 75 years	591	22,3	3,8	17 to 63 years
White females	300	22,1	3,9	16 to 42 years	449	21,5	3,6	18 to 55 years
Total	905	22,8	4,7	15 to 75 years	1 919	22,4	4,1	17 to 63 years

Number of missing responses = 27 for patients and 5 for controls.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
n_1, mean$_1$, SD$_1$ and range$_1$ refer to patients.
n_2, mean$_2$, SD$_2$ and range$_2$ refer to controls.

Table 5.86 ANOVA summary table for mean age stratified by gender and/or race population group in students presenting at the UCT-SHS-MHS (1991-1993).

Source	Df	Sum of squares	Mean square	F-ratio	Prob >F
Regression model	15	1 987,6	132,5	7,26	0,000[Sig]
Error	2 809	51 250,4	18,3		
Corrected total	2 824	53 238,0			

Factor	Df	Sum of squares	Mean square	F-ratio	Prob >F
Patients versus controls	1	133,9	133,9	7,34	0,007[Sig]
Patient gender	1	244,8	244,8	13,41	0,000[Sig]
Control gender	1	0,0	0,0	0,00	0,993[NS]
Patient race/population group	3	622,4	207,5	11,37	0,000[Sig]
Control race/population group	3	91,8	30,6	1,68	0,170[NS]
Patient gender and race/population group	3	21,1	7,0	0,39	0,764[NS]
Control gender and race/population group	3	67,7	22,6	1,24	0,295[NS]

$R^2 = 0,037$.

Table 5.87 demonstrates that, for gender, male students have a greater mean age than female students who present at the UCT-SHS-MHS or who are registered at the University of Cape Town (by 4,9 and 4,6 per cent, respectively). For race/population group, African students followed by Indian students have the highest mean age for UCT-SHS-MHS attendees (both greater than 23,0 years) while White students followed by African students have the highest mean age for the total student community (both greater than 24,0 years). For race/population group and gender combined, Indian males followed by African males, White males and African females have the highest mean age for students who present at the UCT-SHS-MHS (all greater than 23,0 years) while White males followed by African males, African females and Coloured males have the highest mean age for students who are registered at the University of Cape Town (all greater than 24,0 years). Table 5.88 demonstrates by means of a factorial ANOVA that patient gender (p=0,003), patient race/population group (p=0,016) and total student community race/population group (p=0,028) produce statistically significant results for the mean age of student attendees.

Table 5.87 Frequency, mean age (with standard deviations) and range (minimum and maximum ages) of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency, mean age (with standard deviations) and range (minimum and maximum ages) of total student community (N=23 158) stratified by gender, race/population group and race/population group and gender combined.

(a) Gender								
Gender	n_1	Age		Range$_1$	n_3	Age		Range$_3$
		mean$_1$	SD$_1$			mean$_3$	SD$_3$	
Males	377	23,5	5,3	17 to 75 years	13 450	24,9	6,8	15 to 75 years
Females	528	22,4	4,2	15 to 45 years	9 706	23,8	6,7	16 to 71 years
Total	905	22,8	4,7	15 to 75 years	23 156	24,6	7,0	15 to 75 years
(b) Race/population group								
Race/population group[1]	n_1	Age		Range$_1$	n_3	Age		Range$_3$
		mean$_1$	SD$_1$			mean$_3$	SD$_3$	
Africans	271	23,5	4,7	15 to 45 years	3 382	24,6	6,3	16 to 59 years
Coloureds	121	22,3	3,7	17 to 44 years	3 000	23,4	6,6	17 to 61 years
Indians	36	23,3	5,4	17 to 44 years	977	22,4	5,3	15 to 73 years
Whites	477	22,5	4,8	16 to 75 years	15 798	24,7	7,0	16 to 75 years
Total	905	22,8	4,7	15 to 75 years	23 157	24,6	7,0	15 to 75 years

(c) Race/population group and gender								
Race/population group[1] and gender	n_1	Age mean$_1$	SD_1	Range$_1$	n_3	Age mean$_3$	SD_3	Range$_3$
African males	149	23,8	4,4	17 to 40 years	2 269	24,6	6,0	17 to 54 years
African females	122	23,2	5,2	15 to 45 years	1 113	24,4	6,8	16 to 59 years
Coloured males	36	22,8	4,8	18 to 44 years	1 497	24,2	7,2	17 to 57 years
Coloured females	85	22,1	3,2	17 to 32 years	1 506	22,4	5,7	17 to 61 years
Indian males	15	24,3	6,2	17 to 44 years	591	23,0	6,0	15 to 73 years
Indian females	21	22,5	4,7	18 to 41 years	386	21,6	3,9	16 to 42 years
White males	177	23,3	6,1	17 to 75 years	9 096	25,2	6,9	16 to 75 years
White females	300	22,1	3,9	16 to 42 years	6 701	24,0	6,8	16 to 71 years
Total	905	22,8	4,7	15 to 75 years	23 156	24,6	7,0	15 to 75 years

Number of missing responses = 27 for patients and 2 for total student community.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
n_1, mean$_1$, SD_1 and range$_1$ refer to patients.
n_3, mean$_3$, SD_3 and range$_3$ refer to the total student community.

Table 5.88 ANOVA summary table for mean age stratified by gender and/or race/population group in students presenting at the UCT-SHS-MHS (1991-1993).

Source	Df	Sum of squares	Mean square	F-ratio	Prob >F
Regression model	15	18 800,7	1 253,4	28,06	$0,000^{Sig}$
Error	23 139	1 033 541,1	44,7		
Corrected total	23 154	1 052 341,8			

Factor	Df	Sum of squares	Mean square	F-ratio	Prob >F
Patients versus total student community	1	164,4	164,4	3,68	$0,055^{NS}$
Patient gender	1	406,9	406,9	9,11	$0,003^{Sig}$
Total student community gender	1	0,6	0,6	0,01	$0,910^{NS}$
Patient race/population group	3	461,9	154,0	3,45	$0,016^{Sig}$
Total student community race/pop group	3	406,0	135,3	3,03	$0,028^{Sig}$
Patient gender and race/population group	3	122,8	40,9	0,92	$0,432^{NS}$
Total student community, gender and race/population group	3	46,4	15,5	0,35	$0,792^{NS}$

$R^2 = 0,179$.

(c) Objective 4 (number of consultations)

Research Hypothesis IIIb of the UCT-SHS study is as follows:

> *Older (students (whose age is greater than 25 years) are likely to require more consultations for mental disorders at the UCT-SHS-MHS than their younger peers.*

In this objective Research Hypothesis IIIb is either confirmed or rejected according to the mean number of consultations for UCT-SHS-MHS attendees (patients).

(i) Abridged format

Table 5.89 demonstrates that 3 441 individual consultations were made by 905 documented patients attending the UCT-SHS-MHS from 1991 to 1993 – a mean of 3,8 consultations per patient with a range of 1 to 29 consultations. Students who are greater than or equal to 25 years of age were responsible for the highest mean number of consultations per student followed by students who are 20-24 years of age (both

greater than 3,6 consultations per patient). Students who are 20 to 24 years of age, on the other hand, were responsible for the highest number of consultations followed by students greater than or equal to 25 years of age (both greater than 800 consultations). Table 5.90 demonstrates that age (according to WHO designated age categories) did not produce a statistically significant (p=0,434) result in the mean number of consultations required by the student.

Table 5.89 Frequency, percentages, mean number and range of consultations (N=3 441) in students presenting at the UCT-SHS-MHS (1991-1993) stratified by World Health Organisation (WHO) designated age categories.

Age (in years)	n	%	No. of cons.		Range
			mean	SD	
15-19	633	18,4	3,6	3,0	1 to 21 consultations
20-24	1 957	56,9	3,8	3,3	1 to 20 consultations
≥25	851	24,7	4,0	4,1	1 to 29 consultations
Total	3 441	100,0	3,8	3,5	1 to 29 consultations

Number of missing responses = 27.

Table 5.90 ANOVA summary table for the mean number of consultations by World Health Organisation (WHO) designated age categories in students presenting at the UCT-SHS-MHS (1991-1993).

Age	Df	Sum of squares	Mean square	F-ratio	Prob >F
Regression model	2	20,3	10,2	0,84	$0,434^{NS}$
Error	903	10 962,8	12,2		
Corrected total	905	10 983,1			

$R^2 = 0,002$

(ii) Highly abridged format

Table 5.91 demonstrates that the mean number of consultations per student is higher for students greater than or equal to 25 years of age than students less than 25 years of age (by 8,1 per cent) while the total number of consultations is higher for students less than 25 years of age than students greater than or equal to 25 years of age (by 204,3 per cent) who attend the UCT-SHS-MHS from 1991 to 1993. As the ANOVA previously appearing in the abridged format for age (Table 5.90) produced a non-significant (Df = 2; Prob >F = 0,434) result, no t-test has been performed (invalid procedure) for this particular format of the age-specific variable. This finding therefore rejects Research Hypothesis IIIb for Objective 4 of the UCT-SHS study.

Table 5.91 Frequency, percentages, mean number and range of consultations (N=3 441) in students presenting at the UCT-SHS-MHS (1991-1993) stratified by students less than 25 years of age versus students greater than or equal to 25 years of age.

Age (in years)	n	%	No. of cons		Range
			mean	SD	
<25	2 590	75,3	3,7	3,3	1 to 21 consultations
≥25	851	24,7	4,0	4,1	1 to 29 consultations
Total	3 441	100,0	3,8	3,5	1 to 29 consultations

Number of missing responses = 27 for patients.

5.1.2.5 Language

(a) Objective 1 (attendees) – Descriptive data

(i) Non-abridged format

Table 5.92 demonstrates that English-speaking students were responsible for the greatest (by far) number of attendees at the UCT-SHS-MHS from 1991 to 1993 followed (distantly) by IsiXhosa and SeTswana students (all greater than 50 attendees) while the subcategory Other refers to languages other than the leading five listed in the table and includes IsiNdabele (31 attendees), Afrikaans (18 attendees) and TshiVenda (13 attendees).

Table 5.92 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) stratified by language.

Language	n	%
English	599	66,2
SeSotho	46	5,1
SeTswana	53	5,9
IsiXhosa	84	9,3
IsiZulu	37	4,1
Other[1]	86	9,5
Total	905	100,0

Number of missing responses = 27.
[1]This subcategory has been excluded from statistical analyses with affected patients being entered as missing responses.

(ii) Abridged format

– Patient-specific data

Table 5.93 demonstrates that there was a greater number of English first language speaking students than non-English first language speaking students (by 95,8 per cent) who attended the UCT-SHS-MHS from 1991 to 1993.

Table 5.93 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) stratified by English first language speaking students versus non-English first language speaking students.

Language	n	%
English	599	66,2
Non-English	306	33,8
Total	905	100,0

Number of missing responses = 27.

– Clinical/diagnostic-specific data

A: Major diagnostic categories

Table 5.94 demonstrates that English first language speaking students were diagnosed as presenting at the UCT-SHS-MHS with a greater number of all major diagnostic categories than non-English first language speaking students (by 157,1 per cent for affective disorders, by 148,7 per cent for adjustment disorders, by 61,7 per cent for V-codes, by 37,8 per cent for anxiety (neurotic) disorders, by 140,4 per cent for "other" disorders and by 98,7 per cent for total (combined) disorders, respectively) – however, only adjustment disorder, anxiety (neurotic) disorder and total (combined) disorders produced statistically significant (p=0,046; 0,007 and 0,010, respectively) differences. For English first language speaking students, adjustment disorder was the most common presenting major diagnostic category while V-codes was the most frequently coded major diagnostic category for non-English first language speaking students. Only adjustment disorder produced a statistically significant (p=0,046) result in favour of English first language speaking students while only anxiety (neurotic) disorder produced a statistically significant (p=0,007) result in favour of non-English first language speaking students.

Table 5.94 Major diagnostic categories of English first language speaking students (N=599) versus non-English first language speaking students (N=306) presenting at the UCT-SHS-MHS (1991-1993).

Major diagnostic category	English		Non-English		Unadjusted OR (with 95% CI)	Df	χ^2	p
	n	%	n	%				
Affective disorder	72	11,8	28	9,1	1,3 (0,8 - 2,2)	1	1,5	$0,219^{NS}$
Adjustment disorder	194	31,7	78	25,3	1,4 (1,0 - 1,9)	1	4,0	$0,046^{Sig}$
V-codes	131	21,4	81	26,3	0,8 (0,6 - 1,1)	1	2,8	$0,096^{NS}$
Anxiety (neurotic) disorder	102	16,7	74	24,0	0,6 (0,5 - 0,9)	1	7,2	$0,007^{Sig}$
"Other" disorders	113	18,5	47	15,3	1,3 (0,9 - 1,9)	1	1,5	$0,226^{NS}$
Total	612	100,0	308	100,0	-	4	13,3	$0,010^{Sig}$

Number of missing responses = 27 for patients and 31 for diagnoses.

B: Individual V-codes

Table 5.95 demonstrates that English first language speaking students were diagnosed as presenting at the UCT-SHS-MHS with a greater number of relationship problems, family problems, academic problems and total (combined) V-codes than non-English first language speaking students (by 51,4; 355,6; 22,2 and 61,7 per cent, respectively) – however, only family problem and total (combined) V-codes produced statistically significant (p=0,001 and 0,009, respectively) differences. On the other hand, non-English first language speaking students recorded more pre- and post-termination counselling for unplanned/unwanted pregnancies than English first language speaking students (by 15,4 per cent) – this difference was not statistically significant. Complicated bereavement was tied. For English first language speaking students, relationship problem was the most common presenting individual V-code as well as the most frequently coded individual V-code for non-English first language speaking students. Only family problem produced a statistically significant (p=0,001) result in favour of English first language speaking students.

Table 5.95 Individual V-codes of English first language speaking students (N=599) versus non-English first language speaking students (N=306) presenting at the UCT-SHS-MHS (1991-1993).

Individual V-code	English		Non-English		Unadjusted OR (with 95% CI)	Df	χ^2	p
	n	%	n	%				
Relationship problem	53	40,5	35	43,2	0,9 (0,5 - 1,6)	1	0,2	$0,693^{NS}$
Family problem	41	31,3	9	11,1	3,6 (1,6 - 8,7)	1	11,3	$0,001^{Sig}$
Complicated bereavement	13	9,9	13	16,1	0,6 (0,2 - 1,4)	1	1,8	$0,186^{NS}$
Unplanned/unwanted pregnancy	13	9,9	15	18,5	0,5 (0,2 - 1,2)	1	3,2	$0,073^{NS}$
Academic problem	11	8,4	9	11,1	0,7 (0,3 - 2,0)	1	0,4	$0,511^{NS}$
Total V-codes	131	100,0	81	100,0	-	4	13,5	$0,009^{Sig}$

Number of missing responses = unknown.

(b) Objective 2 (patients versus controls) and Objective 3 (patients versus the total student community)

Research Hypothesis IVa of the UCT-SHS study is as follows:

> *Non-English first language speaking students are more likely to present with mental disorders at the UCT-SHS-MHS than their English first language speaking peers.*

In these objectives Research Hypothesis IVa is either confirmed or rejected according to the unadjusted odds ratio or χ^2 test (p-value) for UCT-SHS-MHS attendees (patients) versus UCT-SHS medical attendees (controls) [Objective 2] or to additional usage/utilisation rates per 1 000 students and utilisation ratios for patients versus registered UCT students (the total student community) [Objective 3].

(i) Non-abridged format

Table 5.96 demonstrates that only English-speaking students were statistically (p=0,003) more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS which corresponds to a likelihood ratio ($\%_1:\%_2$) of 1,083. In fact, these students are 5,5 per cent overrepresented (with a standardised residual of +1,3) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0. Conversely, only IsiXhosa-speaking students were statistically (p=0,020) less likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS which corresponds to a likelihood ratio ($\%_1:\%_2$) of 0,762. In fact, these students are 17,8 per cent underrepresented (with a standardised residual of -1,8) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0. In addition, the language-specific variable with its five (for purposes of analysis) subcategories did produce a statistically significant (p=0,046) result.

However, Table 5.97 demonstrates that SeTswana, SeSotho, IsiZulu and IsiXhosa-speaking students were statistically (p=0,000 each) more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than their representation of the student community would suggest while only English-speaking students were statistically (p=0,000) less likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than their representation of the student community would suggest which correspond to likelihood ratios ($\%_1$:$\%_2$) of 2,565, 2,217, 1,952 and 1,691, respectively. In fact, these students are 151,2, 120,1, 93,7 and 69,4 per cent, respectively, overrepresented (with standardised residuals of +6,9, +5,5, +4,1 and +4,9, respectively) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0. In addition, the language-specific variable with its five (for purposes of analysis) subcategories did produce a statistically significant (p=0,000) result.

Table 5.96 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of controls (N=1 924) stratified by language.

Language	n_1	$\%_1$	n_2	$\%_2$	Unadjusted OR (with 95% CI)	Df	χ^2	p
English	599	66,2	1 173	61,1	1,3 (1,1 - 1,6)	1	8,6	$0,003^{Sig}$
SeSotho	46	5,1	106	5,5	0,9 (0,6 - 1,3)	1	0,2	$0,635^{NS}$
SeTswana	53	5,9	125	6,5	0,9 (0,6 - 1,2)	1	0,4	$0,509^{NS}$
IsiXhosa	84	9,3	235	12,2	0,7 (0,6 - 1,0)	1	5,4	$0,020^{Sig}$
IsiZulu	37	4,1	101	5,3	0,8 (0,5 - 1,1)	1	1,8	$0,179^{NS}$
Other[1]	86	9,5	179	9,3	N/A	N/A	N/A	N/A
Total	905	100,0	1 919	100,0	-	4	9,7	$0,046^{Sig}$

Number of missing responses = 27 for patients and 5 for controls.
[1]This subcategory has been excluded from statistical analyses with affected patients and controls being entered as missing responses.
n_1 and $\%_1$ refer to patients.
n_2 and $\%_2$ refer to controls.

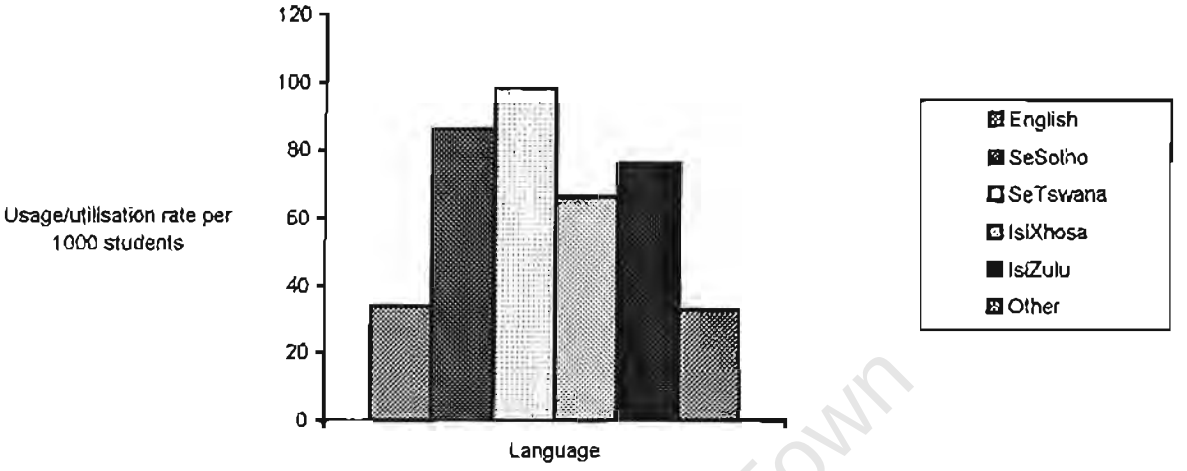
Table 5.97 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of the total student community (N=23 158) stratified by language.

Language	n_1	$\%_1$	n_3	$\%_3$	Unadjusted OR (with 95% CI)	Df	χ^2	p
English	599	66,2	17 686	76,4	0,4 (0,4 - 0,5)	1	122,1	$0,000^{Sig}$
SeSotho	46	5,1	536	2,3	2,3 (1,7 - 3,2)	1	30,3	$0,000^{Sig}$
SeTswana	53	5,9	540	2,3	2,7 (2,0 - 3,7)	1	49,1	$0,000^{Sig}$
IsiXhosa	84	9,3	1 270	5,5	1,8 (1,4 - 2,3)	1	24,3	$0,000^{Sig}$
IsiZulu	37	4,1	488	2,1	2,0 (1,4 - 2,8)	1	16,8	$0,000^{Sig}$
Other[1]	86	9,5	2 636	11,4	N/A	N/A	N/A	N/A
Total	905	100,0	23 156	100,0	-	4	133,4	$0,000^{Sig}$

Number of missing responses = 27 for patients and 2 for total student community.
[1]This subcategory has been excluded from statistical analyses with affected patients and students being entered as missing responses.
n_1 and $\%_1$ refer to patients.
n_3 and $\%_3$ refer to the total student community.

Figure 5.16 illustrates and Table 5.98 demonstrates that SeTswana-speaking students have the highest usage/utilisation rate and, consequently, utilisation ratio followed by SeSotho-speaking students and IsiZulu-speaking students (both greater than 75,0 attendees per 1 000 attendees).

Figure 5.16 Usage/utilisation rate per 1 000 students in students presenting at the UCT-SHS-MHS (1991-1993) stratified by language.



Refer to Table 5.98 for values of usage/utilisation rates.

Table 5.98 Usage/utilisation rate per 1 000 students and utilisation ratio in students presenting at the UCT-SHS-MHS (1991-1993) stratified by language.

Language	Usage/utilisation rate per 1 000 students	Deviation from mean usage/utilisation rate per 1 000 students	Utilisation ratio
English	33,9	-5,2	0,87
SeSotho	85,8	+46,7	2,19
SeTswana	98,1	+59,0	2,51
IsiXhosa	66,1	+27,0	1,69
IsiZulu	75,8	+36,7	1,94
Other	32,6	-6,5	0,83
Mean	39,1	-	1,00

(ii) Abridged format

– Patient-specific data

Table 5.99 demonstrates that non-English first language speaking students are less likely than English first language speaking students to present at the UCT-SHS-MHS than attend the UCT-SHS with purely medical complaints as reflected by a statistically significant (p=0,003) negative OR for patients versus controls which corresponds to a likelihood ratio ($\%_1:\%_2$) of 0,869. In fact, English first language speaking students are 5,5 per cent overrepresented (with a standardised residual of +1,3) and non-English first language speaking students are 9,2 per cent underrepresented (with a standardised residual of -1,7) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0. Adjusted ORs demonstrate that the statistically significant (p=0,003) relationship between patients and controls is NOT preserved when adjusting for gender, race/population group and age.

However, the results in Table 5.100 suggest that non-English first language speaking students are more likely than English first language speaking students to present at the UCT-SHS-MHS as reflected by a statistically significant (p=0,000) positive OR for patients versus total student community which corresponds to a likelihood ratio ($\%_1$:$\%_3$) of 1,432. Here non-English first language speaking students are 40,8 per cent overrepresented (with a standardised residual of +6,0) and English first language speaking students are 12,9 per cent underrepresented (with a standardised residual of -3,4) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0. Adjusted ORs demonstrate that the statistically significant (p=0,000) relationship between patients and the total student community is preserved when adjusting for gender, race/population group and age. These findings therefore reject Research Hypothesis IVa for Objective 2 and confirm Research Hypothesis IVa for Objective 3 of the UCT-SHS study.

Table 5.99 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of controls (N=1 924) stratified by English first language speaking students versus non-English first language speaking students.

(a) Unadjusted ORs and $\chi 2$ tests

Language	n_1	$\%_1$	n_2	$\%_2$	Unadjusted OR (with 95% CI)	Df	χ^2	p
English	599	66,2	1 173	61,1	1,3 (1,1 - 1,6)	1	8,6	$0,003^{Sig}$
Non-English	306	33,8	746	38,9	-	-	-	-
Total	905	100,0	1 919	100,0	-	-	-	-

(b) Expected frequencies

Language	Observed frequency$_1$	Expected frequency$_1$	Difference between observed and expected frequency$_1$	Observed frequency$_2$	Expected frequency$_2$	Difference between observed and expected frequency$_2$
English	599	567,9	+31,1 (+5,5%)	1 173	1 204,1	-31,1 (-2,6%)
Non-English	306	337,1	-31,1 (-9,2%)	746	714,9	+31,1 (+4,4%)
Total	905	905,0	-	1 919	1 919,0	-

(c) ORs adjusted for gender, race/population group and age

Variable	SE	Adjusted OR (with 95% CI)	Df	χ^2	Prob >χ^2
Intercept	0,345	[6,479]	1	29,4	$0,000^{Sig}$
English	0,262	1,3 (0,8 - 2,2)	1	2,4	$0,120^{NS}$
Model Fit	-	-	6	89,4	$0,000^{Sig}$

Number of missing responses = 27 for patients and 5 for controls.
n_1 and $\%_1$ refer to patients.
Observed frequency$_1$ and expected frequency$_1$ refer to patients.
n_2 and $\%_2$ refer to controls.
Observed frequency$_2$ and expected frequency$_2$ refer to controls.

Table 5.100 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of the total student community (N=23 158) stratified by English first language speaking students versus non-English first language speaking students.

(a) Unadjusted ORs and $\chi 2$ tests

Language	n_1	$\%_1$	n_3	$\%_3$	Unadjusted OR (with 95% CI)	Df	χ^2	p
English	599	66,2	17 686	76,4	-	-	-	-
Non-English	306	33,8	5 470	23,6	1,7 (1,5 - 1,9)	1	54,2	$0,000^{Sig}$
Total	905	100,0	23 156	100,0	-	-	-	-

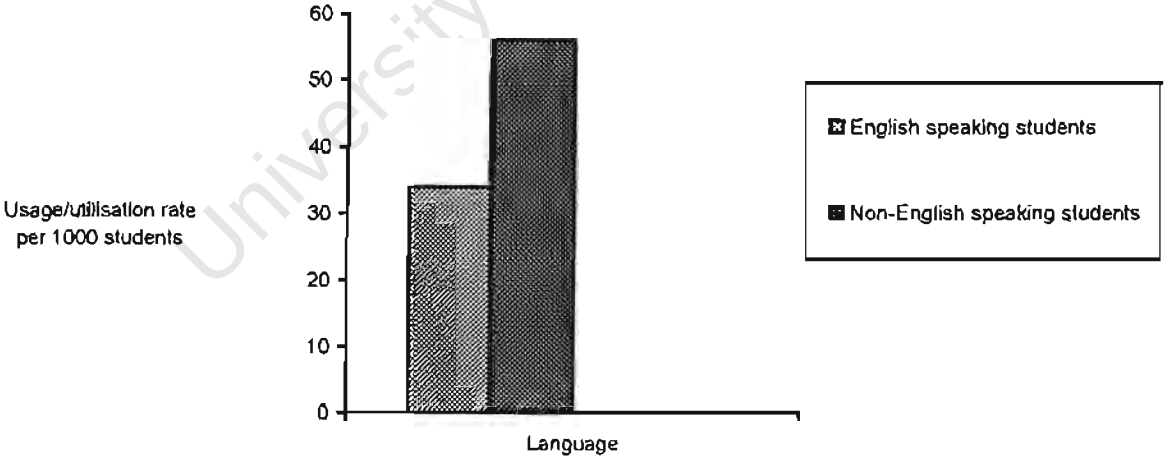
(b) Expected frequencies						
Language	Observed frequency$_1$	Expected frequency$_1$	Difference between observed and expected frequency$_1$	Observed frequency$_3$	Expected frequency$_3$	Difference between observed and expected frequency$_3$
English	599	687,7	-88,7 (-12,9%)	17 686	17 597,3	+88,7 (+0,5%)
Non-English	306	217,3	+88,7 (+40,8%)	5 470	5 558,7	-88,7 (-1,6%)
Total	905	905,0	-	23 156	23 156,0	-

(c) ORs adjusted for gender, race/population group and age					
Variable	SE	Adjusted OR (with 95% CI)	Df	χ^2	Prob > χ^2
Intercept	0,270	[20,257]	1	124,3	0,000^{Sig}
English	0,135	1,3 (1,0 - 1,7)	1	4,4	0,036^{Sig}
Model Fit	-	-	6	329,0	0,000^{Sig}

Number of missing responses = 27 for patients and 2 for total student community.
n_1 and $\%_1$ refer to patients.
Observed frequency$_1$ and expected frequency$_1$ refer to patients.
n_3 and $\%_3$ refer to the total student community.
Observed frequency$_3$ and expected frequency$_3$ refer to the total student community.

Figure 5.17 illustrates and Table 5.101 demonstrates that non-English first language speaking students have a much higher usage/utilisation rate and, consequently, utilisation ratio than English first language speaking-students (by 64,9 and 64,4 per cent, respectively). This patient-specific finding, therefore, is compatible with Research Hypothesis IVa of the UCT-SHS study.

Figure 5.17 Usage/utilisation rate per 1 000 students in students presenting at the UCT-SHS-MHS (1991-1993) stratified by English first language speaking students versus non-English first language speaking students.



Refer to Table 5.101 for values of usage/utilisation rates.

Table 5.101 Usage/utilisation rate per 1 000 students and utilisation ratio in students presenting at the UCT-SHS-MHS (1991-1993) stratified by English first language speaking students versus non-English first language speaking students.

Language	Usage/utilisation rate per 1 000 students	Deviation from mean usage/utilisation rate per 1 000 students	Utilisation ratio
English-speaking students	33,9	-5,2	0,87
Non-English-speaking students	55,9	+16,8	1,43
Mean	39,1	-	1,00

– Clinical/diagnostic-specific data

A: Major diagnostic categories

Table 5.102 demonstrates that, for all major diagnostic categories, non-English first language speaking students have a generally considerably higher usage/utilisation (prevalence) rate and, consequently, utilisation (prevalence) ratio than English first language speaking students (by 24,4 and 25,3 per cent for affective disorder, by 30,0 and 29,5 per cent for adjustment disorder, by 100,0 and 101,3 per cent for V-codes, by 132,8 and 134,2 per cent for anxiety (neurotic) disorder, by 34,4 per cent each for "other" disorders and by 62,7 and 63,2 per cent for total (combined) disorders). These clinical findings therefore are consistent with Research Hypothesis IVa for all major diagnostic categories employed in the UCT-SHS study.

Table 5.102 Usage/utilisation (prevalence) rate per 1 000 students and utilisation (prevalence) ratio for major diagnostic categories in students presenting at the UCT-SHS-MHS (1991-1993) stratified by English first language speaking students versus non-English first language speaking students.

(a) Affective disorder			
Language	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
English	4,1	-0,2	0,95
Non-English	5,1	+0,8	1,19
Mean	4,3	-	1,00
(b) Adjustment disorder			
Language	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
English	11,0	-0,6	0,95
Non-English	14,3	+2,7	1,23
Mean	11,6	-	1,00
(c) V-codes			
Language	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
English	7,4	-1,8	0,80
Non-English	14,8	+5,6	1,61
Mean	9,2	-	1,00
(d) Anxiety (neurotic) disorder			
Language	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
English	5,8	-1,8	0,76
Non-English	13,5	+5,9	1,78
Mean	7,6	-	1,00
(e) "Other" disorders			
Language	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
English	6,4	-0,5	0,93
Non-English	8,6	+1,7	1,25
Mean	6,9	-	1,00

(f) Total (combined) disorders			
Language	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
English	34,6	-5,1	0,87
Non-English	56,3	+16,6	1,42
Mean	39,7	-	1,00

Number of missing responses = 27 for patients and 31 for diagnoses.

B: Individual V-codes

Table 5.103 demonstrates that, for relationship problem, complicated bereavement, pre- and post-termination counselling for unplanned/unwanted pregnancy, academic problem and total (combined) V-codes, non-English first language speaking students have a generally considerably higher usage/utilisation (prevalence) rate and, consequently, utilisation (prevalence) ratio than English first language speaking students (by 113,3 and 112,7 per cent for relationship problem, by 242,9 and 240,6 per cent for complicated bereavement, by 285,7 and 287,9 per cent for pre- and post-termination counselling for unplanned/unwanted pregnancy, by 166,7 and 165,7 per cent for academic problem and by 100,0 and 101,3 per cent for total (combined) V-codes). The only exception to this rule is family problem where the usage/utilisation (prevalence) rate and utilisation (prevalence) ratio are 43,8 per cent each higher for English first language speaking students. These clinical findings therefore are consistent with Research Hypothesis IVa for relationship problem, complicated bereavement, pre- and post-termination counselling for unplanned/unwanted pregnancy, academic problem and total (combined) V-codes but are not consistent with Research Hypothesis IVa for family problem.

Table 5.103 Usage/utilisation (prevalence) rate per 1 000 students and utilisation (prevalence) ratio for individual V-codes in students presenting at the UCT-SHS-MHS (1991-1993) stratified by English first language speaking students versus non-English first language speaking students.

(a) Relationship problem			
Language	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
English	3,0	-0,8	0,79
Non-English	6,4	+2,6	1,68
Mean	3,8	-	1,00
(b) Family problem			
Language	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
English	2,3	+0,1	1,05
Non-English	1,6	-0,6	0,73
Mean	2,2	-	1,00
(c) Complicated bereavement			
Language	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
English	0,7	-0,4	0,64
Non-English	2,4	+1,3	2,18
Mean	1,1	-	1,00

(d) Pre- and post-termination counselling for unplanned/unwanted pregnancy			
Language	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
English	0,7	-0,5	0,58
Non-English	2,7	+1,5	2,25
Mean	1,2	-	1,00
(e) Academic problem			
Language	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
English	0,6	-0,3	0,67
Non-English	1,6	+0,7	1,78
Mean	0,9	-	1,00
(f) Total (combined) V-codes			
Language	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
English	7,4	-1,8	0,80
Non-English	14,8	+5,6	1,61
Mean	9,2	-	1,00

Number of missing responses = unknown.

(c) Objective 4 (number of consultations)

Research Hypothesis IVb of the UCT-SHS study is as follows:

> *Non-English first language speaking students are likely to require more consultations for mental disorders at the UCT-SHS-MHS than their English first language speaking peers.*

In this objective Research Hypothesis IVb is either confirmed or rejected according to the mean number of consultations for UCT-SHS-MHS attendees (patients).

(i) Non-abridged format

Table 5.104 demonstrates that 3 441 individual consultations were made by 905 documented patients attending the UCT-SHS-MHS from 1991 to 1993 – a mean of 3,8 consultations per patient with a range of 1 to 29 consultations. SeSotho-speaking students were responsible for the highest mean number of consultations per student followed by English, IsiXhosa and IsiZulu students (all greater than 3,2 consultations per patient) while the subcategory Other refers to languages other than the leading five listed in the table and includes IsiNdabele, Afrikaans and TshiVenda. English-speaking students, on the other hand, were responsible for the highest total number of consultations followed by IsiXhosa and SeSotho (all greater than 180 consultations). Table 5.105 demonstrates that language did produce a statistically significant (p=0,012) result in the mean number of consultations required by the student. Table 5.106 demonstrates that, for pairwise comparisons, English versus SeTswana and SeSotho versus SeTswana produce statistically significant results.

Table 5.104 Frequency, percentages, mean number and range of consultations (N=3 441) in students presenting at the UCT-SHS-MHS (1991-1993) stratified by language.

Language	n	%	No. of cons		Range
			mean	SD	
English	2 363	68,7	3,9	3,5	1 to 26 consultations
SeSotho	199	5,8	4,3	5,4	1 to 29 consultations
SeTswana	119	3,5	2,2	1,6	1 to 7 consultations
IsiXhosa	284	8,3	3,4	3,4	1 to 15 consultations
IsiZulu	124	3,6	3,4	2,8	1 to 14 consultations
Other	352	10,2	4,1	3,4	1 to 15 consultations
Total	3 441	100,0	3,8	3,5	1 to 29 consultations

Number of missing responses = 27 for patients.

Table 5.105 ANOVA summary table for the mean number of consultations by language in students presenting at the UCT-SHS-MHS (1991-1993).

Language	Df	Sum of squares	Mean square	F-ratio	Prob >F
Regression model	5	176,8	35,4	2,95	$0,012^{Sig}$
Error	900	11 084,2	12,0		
Corrected total	905	11 261,0			

$R^2 = 0,007$

Table 5.106 Tukey pairwise comparisons for mean number of consultations by language in students presenting at the UCT-SHS-MHS (1991-1993).

Language	Difference between means (with 95% CI)
English	
SeSotho	$-0,375$ ($-1,888 - +1,139$)^{NS}
SeTswana	$+1,706$ ($+0,289 - +3,124$)^{Sig}
IsiXhosa	$+0,571$ ($-0,582 - +1,723$)^{NS}
IsiZulu	$+0,600$ ($-1,071 - +2,276$)^{NS}
Other	$+0,103$ ($-0,915 - +1,122$)^{NS}
SeSotho	
SeTswana	$+2,081$ ($+0,088 - +4,074$)^{Sig}
IsiXhosa	$+0,945$ ($-0,869 - +2,759$)^{NS}
IsiZulu	$+0,975$ ($-1,210 - +3,159$)^{NS}
Other	$+0,478$ ($-1,210 - +3,159$)^{NS}
SeTswana	
IsiXhosa	$-1,136$ ($-2,871 - +0,599$)^{NS}
IsiZulu	$-1,106$ ($-3,225 - +1,013$)^{NS}
Other	$-1,603$ ($-3,252 - +0,046$)^{NS}
IsiXhosa	
IsiZulu	$+0,030$ ($-1,922 - +1,981$)^{NS}
Other	$-0,467$ ($-1,895 - +0,960$)^{NS}
IsiZulu	
Other	$-0,497$ ($-2,372 - +1,379$)^{NS}

$\alpha = 0,05$; df = 899; MSE = 12,0
Critical value of Studentized Range = 4,039

(ii) Abridged format

Table 5.107 demonstrates that the mean number of consultations per student and the total number of consultations is higher for English-speaking students than non-English-speaking students (by 11,4 and 119,2 per cent, respectively) who attend the UCT-SHS-MHS from 1991 to 1993. The language-specific difference between the mean number of consultations per patient is statistically insignificant. This finding therefore rejects Research Hypothesis IVb for Objective 4 of the UCT-SHS study.

Table 5.107 Frequency, percentages, mean number and range of consultations (N=3 441) in students presenting at the UCT-SHS-MHS (1991-1993) stratified by English first language speaking students versus non-English first language speaking students.

Language	n	%	No. of cons		Range	Df	t	p
			mean	SD				
English	2 363	68,7	3,9	3,5	1 to 26 consultations	903,0	-1,75	$0,080^{NS}$
Non-English	1 078	31,3	3,5	3,5	1 to 29 consultations	-	-	-
Total/Ho	3 441	100,0	3,8	3,5	1 to 29 consultations	-	-	-

Number of missing persons = 27 for patients.

5.1.3 Academic Variables

5.1.3.1 Faculty

(a) Objective 1 (attendees) – Descriptive data

(i) Non-abridged format

Table 5.108 demonstrates that Social Science and Humanities faculty students were responsible for the greatest number of attendees at the UCT-SHS-MHS from 1991 to 1993 followed by Arts, Science and Commerce students (all greater than 100 attendees).

Table 5.108 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) stratified by faculty.

Faculty	n	%
Arts	181	20,0
Commerce	106	11,7
Education	42	4,6
Engineering	96	10,6
Fine Art and Architecture	34	3,8
Law	24	2,7
Medicine	51	5,6
Music	19	2,1
Science	107	11,8
Social Science and Humanities	245	27,1
Total	905	100,0

Number of missing responses = 27.

(ii) Abridged format

– Patient-specific data

Table 5.109 demonstrates that there was a greater number of non-Arts, Music and Social Science and Humanities faculty students than Arts, Music and Social Science and Humanities faculty students (by 3,3 per cent) who attended the UCT-SHS-MHS from 1991 to 1993.

Table 5.109 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) stratified by Arts, Music and Social Science and Humanities faculty students versus non-Arts, Music and Social Science and Humanities faculty students.

Faculty	n	%
Arts, Music and Social Science and Humanities faculties	445	49,2
Non-Arts, Music and Social Science and Humanities faculties	460	50,8
Total	905	100,0

Number of missing responses = 27.

– Clinical/diagnostic-specific data

A: Major diagnostic categories

Table 5.110 demonstrates that Arts, Music and Social Science and Humanities faculty students were diagnosed as presenting at the UCT-SHS-MHS with a greater number of affective disorders, adjustment disorders and V-codes than non-Arts, Music and Social Science and Humanities faculty students (by 27,3; 4,5 and 3,8 per cent, respectively) – however, none of these major diagnostic categories produced a statistically significant difference. On the other hand, non-Arts, Music and Social Science and Humanities faculty students recorded more anxiety (neurotic) disorders, "other" disorders and total (combined) disorders than Arts, Music and Social Science and Humanities faculty students (by 14,6; 50,0 and 4,9 per cent, respectively) – however, only "other" disorders produced a statistically significant (p=0,014) difference. For Arts, Music and Social Science and Humanities faculty students, adjustment disorder was the most common presenting major diagnostic category as well as the most frequently coded major diagnostic category for non-Arts, Music, Social Science and Humanities faculty students. Only "other" disorders produced a statistically significant (p=0,014) result in favour of non-Arts, Music and Social Science and Humanities faculty students.

Table 5.110 Major diagnostic categories of Arts, Music and Social Science and Humanities faculty students (N=445) versus non-Arts, Music and Social Science and Humanities faculty students (N=460) presenting at the UCT-SHS-MHS (1991-1993).

Major diagnostic category	Arts, Music and Social Science and Humanities		Non-Arts, Music and Social Science and Humanities		Unadjusted OR (with 95% CI)	Df	χ^2	p
	n	%	n	%				
Affective disorder	56	12,5	44	9,3	1,4 (0,9 - 2,1)	1	2,3	$0,127^{NS}$
Adjustment disorder	139	31,0	133	28,2	1,1 (0,9 - 1,5)	1	0,8	$0,366^{NS}$
V-codes	108	24,1	104	22,1	1,1 (0,8 - 1,5)	1	0,5	$0,478^{NS}$
Anxiety (neurotic) disorder	82	18,3	94	20,0	0,9 (0,6 - 1,3)	1	0,4	$0,514^{NS}$
"Other" disorders	64	14,3	96	20,4	0,7 (0,5 0,9)	1	6,0	$0,014^{Sig}$
Total	449	100,0	471	100,0	-	4	8,3	$0,080^{NS}$

Number of missing responses = 27 for patients and 31 for diagnoses.

B: Individual V-codes

Table 5.111 demonstrates that Arts, Music and Social Science and Humanities faculty students were diagnosed as presenting at the UCT-SHS-MHS with a greater number of relationship problems and total (combined) V-codes than non-Arts, Music and Social Science and Humanities faculty students (by 31,6 and 3,8 per cent, respectively) – however these differences were not statistically significant. On the other hand, non-Arts, Music and Social Science and Humanities faculty students recorded more complicated bereavement, pre- and post-termination counselling for unplanned/unwanted pregnancies and academic problems than Arts, Music and Social Science and Humanities faculty students (by 16,7; 33,3 and 22,2 per cent, respectively) – however, none of these individual V-codes produced a statistically significant difference. The number of diagnoses for the individual V-code of family problems were tied. For Arts, Music and Social Science and Humanities faculty students, relationship problem was the most common presenting individual V-code as well as the most frequently coded individual V-code for non-Arts, Music, Social Science and Humanities faculty students. However, no individual V-code produced a statistically significant result in favour of either Arts, Music and Social Science and Humanities faculty students or non-Arts, Music and Social Science and Humanities faculty students.

Table 5.111 Individual V-codes of Arts, Music and Social Science and Humanities faculty students (N=445) versus non-Arts, Music and Social Science and Humanities faculty students (N=460) presenting at the UCT-SHS-MHS (1991-1993).

Individual V-code	Arts, Music and Social Science and Humanities		Non-Arts, Music and Social Science and Humanities		Unadjusted OR (with 95% CI)	Df	χ^2	p
	n	%	n	%				
Relationship problem	50	46,3	38	36,5	1,5 (0,8 - 2,7)	1	2,1	$0,149^{NS}$
Family problem	25	23,2	25	24,0	1,0 (0,5 - 1,9)	1	0,0	$0,879^{NS}$
Complicated bereavement	12	11,1	14	13,5	0,8 (0,3 - 2,0)	1	0,3	$0,602^{NS}$
Unplanned/unwanted pregnancy	12	11,1	16	15,4	0,7 (0,3 - 1,6)	1	0,8	$0,358^{NS}$
Academic problem	9	8,3	11	10,6	0,8 (0,3 - 2,1)	1	0,3	$0,576^{NS}$
Total V-codes	108	100,0	104	100,0	-	4	2,5	$0,647^{NS}$

Number of missing responses = unknown.

(b) Objective 2 (patients versus controls) and Objective 3 (patients versus the total student community)

Research Hypothesis Va of the UCT-SHS study is as follows:

> *Arts, Music and Social Science and Humanities faculty students are more likely to present with mental disorders at the UCT-SHS-MHS than their non-Arts, Music and Social Science and Humanities faculty peers.*

In these objectives Research Hypothesis Va is either confirmed or rejected according to the unadjusted odds ratio or χ^2 test (p-value) for UCT-SHS-MHS attendees (patients) versus UCT-SHS medical attendees

(controls) [Objective 2] or to additional usage/utilisation rates per 1 000 students and utilisation ratios for patients versus registered UCT students (the total student community) [Objective 3].

(i) Non-abridged format

Table 5.112 demonstrates that Arts and Social Science and Humanities faculty students were statistically (p=0,000 and 0,001, respectively) more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS which correspond to likelihood ratios ($\%_1$:$\%_2$) of 1,681 and 1,272, respectively. In fact, these students are 37,7 and 16,9 per cent, respectively, overrepresented (with standardised residuals of +2,9 and +2,4, respectively) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0. Conversely, Engineering and Commerce students were statistically (p=0,000 and 0,001, respectively) less likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS which correspond to likelihood ratios ($\%_1$:$\%_3$) of 0,235 and 0,249, respectively. In fact, these students are 26,8 and 22,3 per cent, respectively, underrepresented (with standardised residuals of -3,1 and -2,6, respectively) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0. In addition, the faculty-specific variable with its ten (for purpose of analysis) subcategories did produce a statistically significant (p=0,000) result.

However, Table 5.113 demonstrates that Arts and Social Science and Humanities faculty students were statistically (p=0,000 each) more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than their representation of the student community would suggest which correspond to likelihood ratios ($\%_1$:$\%_3$) of 2,020 and 1,652, respectively. In fact, these students are 102,2 and 65,4 per cent, respectively, overrepresented (with standardised residuals of +9,6 and +7,9, respectively) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0. Conversely, Medicine, Commerce, Education and Law faculty students were statistically (p=0,000; 0,000; 0,001 and 0,020) less likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than their representation of the student community would suggest which correspond to likelihood ratios ($\%_1$:$\%_3$) of 0,366, 0,622, 0,643 and 0,636, respectively). In fact, these students are 63,2, 37,1, 36,3 and 36,2 per cent, respectively, underrepresented (with standardised residuals of -7,4, -3,0, -2,2 and -4,7, respectively) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0. In addition, the faculty-specific variable with its ten (for purpose of analysis) subcategories did produce a statistically significant (p=0,000) result.

Table 5.112 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of controls (N=1 924) stratified by faculty.

Faculty	n_1	$\%_1$	n_2	$\%_2$	Unadjusted OR (with 95% CI)	Df	χ^2	p
Arts	181	20,0	229	11,9	1,8 (1,5 - 2,3)	1	32,2	$0,000^{Sig}$
Commerce	106	11,7	320	16,7	0,7 (0,5 - 0,8)	1	11,8	$0,001^{Sig}$
Education	42	4,6	64	3,3	1,4 (0,9 - 2,1)	1	2,9	$0,088^{NS}$
Engineering	96	10,6	313	16,3	0,6 (0,5 - 0,8)	1	16,1	$0,000^{Sig}$
Fine Art and Architecture	34	3,8	90	4,7	0,8 (0,5 - 1,2)	1	1,3	$0,259^{NS}$
Law	24	2,7	47	2,5	1,1 (0,7 - 1,8)	1	0,1	$0,748^{NS}$
Medicine	51	5,6	134	7,0	0,8 (0,6 - 1,1)	1	1,8	$0,177^{NS}$
Music	19	2,1	34	1,8	1,2 (0,7 - 2,1)	1	0,4	$0,549^{NS}$
Science	107	11,8	279	14,5	0,8 (0,6 - 1,0)	1	3,8	$0,050^{NS}$
Social Science and Humanities	245	27,1	409	21,3	1,4 (1,1 - 1,6)	1	11,5	$0,001^{Sig}$
Total	905	100,0	1 919	100,0	-	9	69,7	$0,000^{Sig}$

Number of missing responses = 27 for patients and 5 for controls.
n_1 and $\%_1$ refer to patients.
n_2 and $\%_2$ refer to controls.

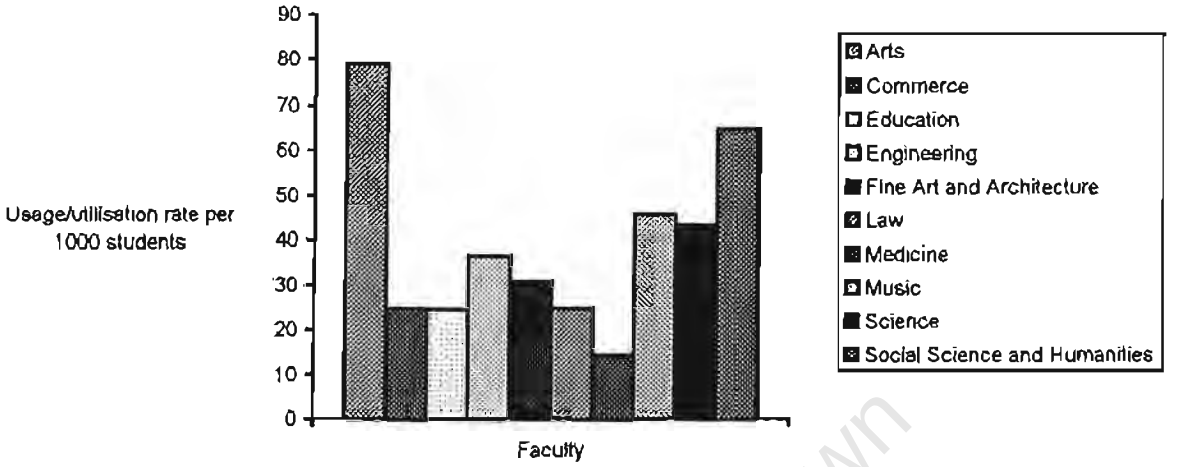
Table 5.113 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of the total student community (N=23 158) stratified by faculty.

Faculty	n_1	$\%_1$	n_3	$\%_3$	Unadjusted OR (with 95% CI)	Df	χ^2	p
Arts	181	20,0	2 290	9,9	2,4 (2,0 - 2,8)	1	108,0	$0,000^{Sig}$
Commerce	106	11,7	4 253	18,4	0,6 (0,5 - 0,7)	1	27,8	$0,000^{Sig}$
Education	42	4,6	1 709	7,4	0,6 (0,4 - 0,8)	1	10,3	$0,001^{Sig}$
Engineering	96	10,6	2 621	11,3	0,9 (0,7 - 1,2)	1	0,5	$0,491^{NS}$
Fine Art and Architecture	34	3,8	1 097	4,7	0,8 (0,5 - 1,1)	1	2,0	$0,157^{NS}$
Law	24	2,7	965	4,2	0,6 (0,4 - 0,9)	1	5,4	$0,020^{Sig}$
Medicine	51	5,6	3 548	15,3	0,3 (0,2 - 0,4)	1	68,1	$0,000^{Sig}$
Music	19	2,1	416	1,8	1,2 (0,7 - 1,9)	1	0,5	$0,484^{NS}$
Science	107	11,8	2 469	10,7	1,1 (0,9 - 1,4)	1	1,3	$0,248^{NS}$
Social Science and Humanities	245	27,1	3 789	16,4	2,0 (1,7 - 2,3)	1	78,9	$0,000^{Sig}$
Total	905	100,0	23 157	100,0	-	9	262,5	$0,000^{Sig}$

Number of missing responses = 27 for patients and 1 for total student community.
n_1 and $\%_1$ refer to patients.
n_3 and $\%_3$ refer to the total student community.

Figure 5.18 illustrates and Table 5.114 demonstrates that Arts faculty students have the highest usage/utilisation rate and, consequently, utilisation ratio followed by Social Science and Humanities faculty students (both greater than 60,0 attendees per 1 000 students).

Figure 5.18 Usage/utilisation rate per 1 000 students in students presenting at the UCT-SHS-MHS (1991-1993) stratified by faculty.



Refer to Table 5.114 for values of usage/utilisation rates.

Table 5.114 Usage/utilisation rate per 1 000 students and utilisation ratio in students presenting at the UCT-SHS-MHS (1991-1993) stratified by faculty.

Faculty	Usage/utilisation rate per 1 000 students	Deviation from mean usage/utilisation rate per 1 000 students	Utilisation ratio
Arts	79,0	+39,9	2,02
Commerce	24,9	-14,2	0,64
Education	24,6	-14,5	0,63
Engineering	36,6	-2,5	0,94
Fine Art and Architecture	31,0	-8,1	0,79
Law	24,9	-14,2	0,64
Medicine	14,4	-24,7	0,37
Music	45,7	+6,6	1,17
Science	43,3	+4,2	1,10
Social Science and Humanities	64,7	+25,6	1,65
Mean	39,1	-	1,00

(ii) Abridged format

– Patient-specific data

Table 5.115 demonstrates that Arts, Music and Social Science and Humanities faculty students are more likely than non-Arts, Music and Social Science and Humanities faculty students to present at the UCT-SHS-MHS than attend the UCT-SHS with purely medical complaints as reflected by a statistically significant (p=0,000) positive OR for patients versus controls which corresponds to a likelihood ratio ($\%_1:\%_2$) of 1,406. In fact, Arts, Music and Social Science and Humanities faculty students are 24,3 per cent overrepresented (with a standardised residual of +4,6) and non-Arts, Music and Social Science and Humanities faculty students are 15,9 per cent underrepresented (with a standardised residual of -3,7) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of

1,0. Adjusted ORs demonstrate that the statistically significant (p=0,000) relationship between patients and controls is preserved when adjusting for gender, race/population group and age.

In addition, results in Table 5.116 suggest that Arts, Music and Social Science and Humanities faculty students are more likely than non-Arts, Music and Social Science and Humanities faculty students to present at the UCT-SHS-MHS as reflected by a statistically significant (p=0,000) positive OR for patients versus total student community which corresponds to a likelihood ratio ($\%_1$:$\%_3$) of 1,757. Here Arts, Music and Social Science and Humanities faculty students are 70,5 per cent overrepresented (with a standardised residual of +11,4) and non-Arts, Music and Social Science and Humanities faculty students are 28,6 per cent underrepresented (with a standardised residual of -7,2) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0. Adjusted ORs demonstrate that the statistically significant (p=0,000) relationship between patients and the total student community is preserved when adjusting for gender, race/population group and age. These findings therefore confirm Research Hypothesis Va for Objectives 2 and 3 of the UCT-SHS study.

Table 5.115 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of controls (N=1 924) stratified by Arts, Music and Social Science and Humanities faculty students versus non-Arts, Music and Social Science and Humanities faculty students.

(a) Unadjusted ORs and χ^2 tests

Faculty	n_1	$\%_1$	n_2	$\%_2$	Unadjusted OR (with 95% CI)	Df	χ^2	p
Arts, Music and Social Science and Humanities faculties	445	49,2	672	35,0	1,8 (1,5 - 2,1)	1	51,5	$0,000^{Sig}$
Non-Arts, Music and Social Science and Humanities faculties	460	50,8	1 247	65,0	-	-	-	-
Total	905	100,0	1 919	100,0	-	-	-	-

(b) Expected frequencies

Faculty	Observed frequency$_1$	Expected frequency$_1$	Difference between observed and expected frequency$_1$	Observed frequency$_2$	Expected frequency$_2$	Difference between observed and expected frequency$_2$
Arts, Music and Social Science and Humanities faculties	445	358,0	+87,0 (+24,3%)	672	759,0	-87,0 (-11,5%)
Non-Arts, Music and Social Science and Humanities faculties	460	547,0	-87,0 (-15,9%)	1 247	1 160,0	+87,0 (+7,5%)
Total	905	905,0	-	1 919	1 919,0	-

(c) ORs adjusted for gender, race/population group and age

Variable	SE	Adjusted OR (with 95% CI)	Df	χ^2	Prob > χ^2
Intercept	0,302	[5,051]	1	28,7	$0,000^{Sig}$
Arts, Music and Social Science and Humanities	0,086	1,6 (1,4 - 1,9)	1	32,0	$0,000^{Sig}$
Model fit	-	-	6	118,9	$0,000^{Sig}$

Number of missing responses = 27 for patients and 5 for controls.
n_1 and $\%_1$ refer to patients.
Observed frequency$_1$ and expected frequency$_1$ refer to patients.
n_2 and $\%_2$ refer to controls.
Observed frequency$_2$ and expected frequency$_2$ refer to controls.

Table 5.116 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of the total student community (N=23 158) stratified by Arts, Music and Social Science and Humanities faculty students versus non-Arts, Music and Social Science and Humanities faculty students.

(a) Unadjusted ORs and $\chi 2$ tests

Faculty	n_1	$\%_1$	n_3	$\%_3$	Unadjusted OR (with 95% CI)	Df	χ^2	p
Arts, Music and Social Science and Humanities faculties	445	49,2	6 495	28,0	2,6 (2,3 - 3,0)	1	208,2	$0,000^{Sig}$
Non-Arts, Music and Social Science and Humanities faculties	460	50,8	16 662	72,0	-	-	-	-
Total	905	100,0	23 157	100,0	-	-	-	-

(b) Expected frequencies

Faculty	Observed frequency$_1$	Expected frequency$_1$	Difference between observed and expected frequency$_1$	Observed frequency$_3$	Expected frequency$_3$	Difference between observed and expected frequency$_3$
Arts, Music and Social Science and Humanities faculties	445	261,0	+184,0 (+70,5%)	6 495	6 679,0	-184,0 (-2,8%)
Non-Arts, Music and Social Science and Humanities faculties	460	644,0	-184,0 (-28,6%)	16 662	16 478,0	+184,0 (+1,1%)
Total	905	905,0	-	23 157	23 157,0	-

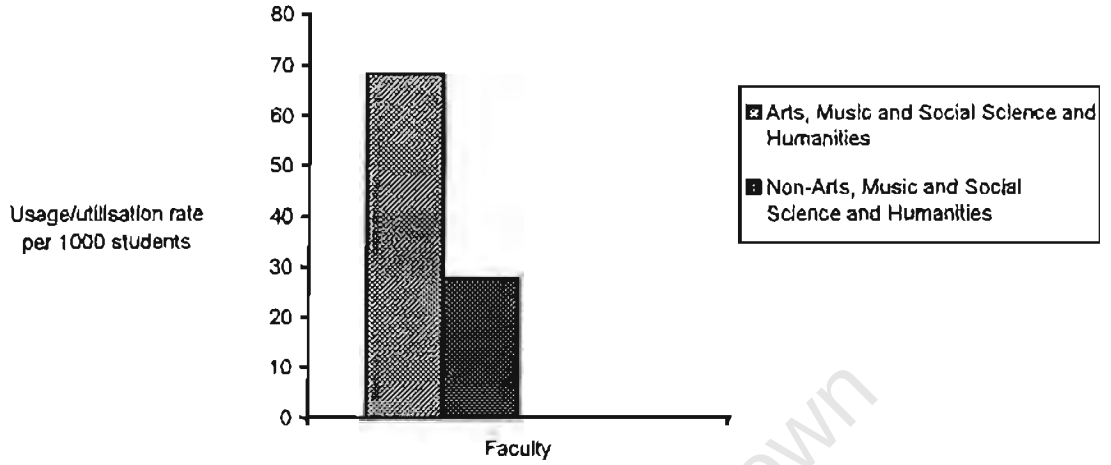
(c) ORs adjusted for gender, race/population group and age

Variable	SE	Adjusted OR (with 95% CI)	Df	χ^2	Prob $>\chi^2$
Intercept	0,230	[18,749]	1	162,3	$0,000^{Sig}$
Arts, Music and Social Science and Humanities	0,071	2,0 (1,7 - 2,3)	1	95,4	$0,000^{Sig}$
Model fit	-	-	6	418,1	$0,000^{Sig}$

Number of missing responses = 27 for patients and 2 for total student community.
n_1 and $\%_1$ refer to patients.
Observed frequency$_1$ and expected frequency$_1$ refer to patients.
n_3 and $\%_3$ refer to the total student community.
Observed frequency$_3$ and expected frequency$_3$ refer to the total student community.

Figure 5.19 illustrates and Table 5.117 demonstrates that Arts, Music and Social Science and Humanities faculty students have a considerably higher usage/utilisation rate and, consequently, utilisation ratio than non-Arts, Music and Social Science and Humanities faculty students (by 148,2 and 146,5 per cent, respectively). This patient-specific finding, therefore, is compatible with Research Hypothesis Va of the UCT-SHS study.

Figure 5.19 Usage/utilisation rate per 1 000 students in students presenting at the UCT-SHS-MHS (1991-1993) stratified by Arts, Music and Social Science and Humanities faculty students versus non-Arts, Music and Social Science and Humanities faculty students.



Refer to Table 5.117 for values of usage/utilisation rates.

Table 5.117 Usage/utilisation rate per 1 000 students and utilisation ratio in students presenting at the UCT-SHS-MHS (1991-1993) stratified by Arts, Music and Social Science and Humanities faculty students versus non-Arts, Music and Social Science and Humanities faculty students.

Faculty	Usage/utilisation rate per 1 000 students	Deviation from mean usage/utilisation rate per 1 000 students	Utilisation ratio
Arts, Music and Social Science and Humanities	68,5	+29,4	1,75
Non-Arts, Music and Social Science and Humanities	27,6	-11,5	0,71
Mean	39,1	-	1,00

– Clinical/diagnostic-specific data

A: Major diagnostic categories

Table 5.118 demonstrates that, for all major diagnostic categories, Arts, Music and Social Science and Humanities faculty students have a generally considerably higher usage/utilisation (prevalence) rate and, consequently, utilisation (prevalence) ratio than non-Arts, Music and Social Science and Humanities faculty students (by 230,8 and 233,3 per cent for affective disorder, by 167,5 and 166,7 per cent for adjustment disorder, by 167,7 and 168,7 per cent for V-codes, by 125,0 and 124,3 per cent for anxiety (neurotic) disorder, by 70,7 and 70,2 per cent for "other" disorders and by 144,2 and 145,1 per cent for total (combined) disorders). These clinical findings therefore are consistent with Research Hypothesis Va for all major diagnostic categories employed in the UCT-SHS study.

Table 5.118 Usage/utilisation (prevalence) rate per 1 000 students and utilisation (prevalence) ratio for major diagnostic categories in students presenting at the UCT-SHS-MHS (1991-1993) stratified by Arts, Music and Social Science and Humanities faculty students versus non-Arts, Music and Social Science and Humanities faculty students.

(a) Affective disorder			
Faculty	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Arts, Music and Social Science and Humanities	8,6	+4,3	2,00
Non-Arts, Music and Social Science and Humanities	2,6	-1,7	0,60
Mean	4,3	-	1,00
(b) Adjustment disorder			
Faculty	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Arts, Music and Social Science and Humanities	21,4	+9,8	1,84
Non-Arts, Music and Social Science and Humanities	8,0	-3,6	0,69
Mean	11,6	-	1,00
(c) V-codes			
Faculty	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Arts, Music and Social Science and Humanities	16,6	+7,4	1,80
Non-Arts, Music and Social Science and Humanities	6,2	-3,0	0,67
Mean	9,2	-	1,00
(d) Anxiety (neurotic) disorder			
Faculty	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Arts, Music and Social Science and Humanities	12,6	+5,0	1,66
Non-Arts, Music and Social Science and Humanities	5,6	-2,0	0,74
Mean	7,6	-	1,00
(e) "Other" disorders			
Faculty	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Arts, Music and Social Science and Humanities	9,9	+3,0	1,43
Non-Arts, Music and Social Science and Humanities	5,8	-1,1	0,84
Mean	6,9	-	1,00
(f) Total (combined) disorders			
Faculty	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Arts, Music and Social Science and Humanities	69,1	+29,4	1,74
Non-Arts, Music and Social Science and Humanities	28,3	-11,4	0,71
Mean	39,7	-	1,00

Number of missing responses = 27 for patients and 31 for diagnoses.

B: Individual V-codes

Table 5.119 demonstrates that, for all individual V-codes, Arts, Music and Social Science and Humanities faculty students have a generally considerably higher usage/utilisation (prevalence) rate and, consequently, utilisation (prevalence) ratio than non-Arts, Music and Social Science and Humanities faculty students (by 234,8 and 232,8 per cent for relationship problem, by 153,3 and 154,4 per cent for family problem, by 125,0 and 124,7 per cent for complicated bereavement, by 80,0 and 80,7 per cent for pre- and post-termination counselling for unplanned/unwanted pregnancy, by 100,0 per cent each for academic problem and by 167,7 and 168,7 per cent for total (combined) V-codes. These clinical findings therefore are consistent with Research Hypothesis Va for all individual V-codes employed in the UCT-SHS study.

Table 5.119 Usage/utilisation (prevalence) rate per 1 000 students and utilisation (prevalence) ratio for individual V-codes in students presenting at the UCT-SHS-MHS (1991-1993) stratified by Arts, Music and Social Science and Humanities faculty students versus non-Arts, Music and Social Science and Humanities faculty students.

(a) Relationship problem			
Faculty	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Arts, Music and Social Science and Humanities	7,7	+3,9	2,03
Non-Arts, Music and Social Science and Humanities	2,3	-1,5	0,61
Mean	3,8	-	1,00
(b) Family problem			
Faculty	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Arts, Music and Social Science and Humanities	3,8	+1,6	1,73
Non-Arts, Music and Social Science and Humanities	1,5	-0,7	0,68
Mean	2,2	-	1,00
(c) Complicated bereavement			
Faculty	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Arts, Music and Social Science and Humanities	1,8	+0,7	1,64
Non-Arts, Music and Social Science and Humanities	0,8	-0,3	0,73
Mean	1,1	-	1,00
(d) Pre- and post-termination counselling for unplanned/unwanted pregnancy			
Faculty	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Arts, Music and Social Science and Humanities	1,8	+0,6	1,50
Non-Arts, Music and Social Science and Humanities	1,0	-0,2	0,83
Mean	1,2	-	1,00

(e) Academic problem			
Faculty	Usage/utilisation (prevalence) rate per 1 000 students	Deviation from mean usage/utilisation (prevalence) rate per 1 000 students	Utilisation (prevalence) ratio
Arts, Music and Social Science and Humanities	1,4	+0,5	1,56
Non-Arts, Music and Social Science and Humanities	0,7	-0,2	0,78
Mean	0,9	-	1,00
(f) Total (combined) Y-codes			
Faculty	Usage/utilisation (prevalence) rate per 1 000 students	Deviation from mean usage/utilisation (prevalence) rate per 1 000 students	Utilisation (prevalence) ratio
Arts, Music and Social Science and Humanities	16,6	+7,4	1,80
Non-Arts, Music and Social Science and Humanities	6,2	-3,0	0,67
Mean	9,2	-	1,00

Number of missing responses = unknown.

(c) Objective 4 (number of consultations)

Research Hypothesis Vb of the UCT-SHS study is as follows:

> *Arts, Music and Social Science and Humanities faculty students are likely to require more consultations for mental disorders at the UCT-SHS-MHS than their non-Arts, Music and Social Science and Humanities faculty peers.*

In this objective Research Hypothesis Vb is either confirmed or rejected according to the mean number of consultations for UCT-SHS-MHS attendees (patients).

(i) Non-abridged format

Table 5.120 demonstrates that 3 441 individual consultations were made by 905 documented patients attending the UCT-SHS-MHS from 1991 to 1993 – a mean of 3,8 consultations per patient with a range of 1 to 29 consultations. Fine Art and Architecture faculty students were responsible for the highest mean number of consultations per student followed by Social Science and Humanities, Arts and Law students (all greater than 3,9 consultations per patient). Social Science and Humanities faculty students, on the other hand, were responsible for the highest total number of consultations followed by Arts, Science and Engineering (all greater than 350 consultations). Table 5.121 demonstrates that faculty did not produce a statistically significant (p=0,580) result in the mean number of consultations required by the student.

Table 5.120 Frequency, percentages, mean number and range of consultations (N=3 441) in students presenting at the UCT-SHS-MHS (1991-1993) stratified by faculty.

Faculty	n	%	No. of cons		Range
			mean	SD	
Arts	717	20,8	4,0	3,2	1 to 17 consultations
Commerce	329	9,6	3,1	2,9	1 to 14 consultations
Education	155	4,5	3,7	3,5	1 to 16 consultations
Engineering	367	10,7	3,8	4,1	1 to 29 consultations
Fine Art and Architecture	157	4,6	4,6	3,6	1 to 16 consultations
Law	95	2,8	4,0	3,2	1 to 12 consultations
Medicine	192	5,6	3,8	3,0	1 to 15 consultations
Music	69	2,0	3,6	2,4	1 to 8 consultations
Science	388	11,3	3,6	3,6	1 to 23 consultations
Social Science and Humanities	972	28,2	4,0	3,7	1 to 26 consultations
Total	3 441	100,0	3,8	3,5	1 to 29 consultations

Number of missing responses = 27 for patients.

Table 5.121 ANOVA summary table for the mean number of consultations by faculty in students presenting at the UCT-SHS-MHS (1991-1993).

Faculty	Df	Sum of squares	Mean square	F-ratio	Prob >F
Regression model	9	92,0	10,2	0,84	$0,580^{NS}$
Error	896	10 891,1	12,2		
Corrected total	905	10 983,1			

R^2 = 0,008

(ii) **Abridged format**

Table 5.122 demonstrates that the mean number of consultations per student and the total number of consultations is higher for Arts, Music and Social Science and Humanities faculty students than non-Arts, Music and Social Science and Humanities faculty students (by 8,1 and 4,5 per cent, respectively) who attend the UCT-SHS-MHS from 1991 to 1993. As the ANOVA previously appearing in the non-abridged format for faculty (Table 5.121) produces a non-significant (Df = 9; Prob >F = 0,580) result, no t-test has been performed (invalid procedure) for this particular format of the faculty-specific variable. This finding therefore rejects Research Hypothesis Vb for Objective 4 of the UCT-SHS study.

Table 5.122 Frequency, percentages, mean number and range of consultations (N=3 441) in students presenting at the UCT-SHS-MHS (1991-1993) stratified by Arts, Music and Social Science and Humanities faculty students versus non-Arts, Music and Social Science and Humanities faculty students.

Faculty	n	%	No. of cons		Range
			mean	SD	
Arts, Music and Social Science and Humanities faculties	1 758	51,1	4,0	3,5	1 to 26 consultations
Non-Arts, Music and Social Science and Humanities faculties	1 683	48,9	3,7	3,5	1 to 29 consultations
Total/Ho	3 441	100,0	3,8	3,5	1 to 29 consultations

Number of missing responses = 27 for patients.

5.1.3.2 Level of study

(a) Objective 1 (attendees) – Descriptive data

(i) Non-abridged format

Table 5.123 demonstrates that Bachelors degree students were responsible for the greatest (by far) number of attendees at the UCT-SHS-MHS from 1991 to 1993 followed (distantly) by Honours and Masters degree students (all greater than 40 attendees).

Table 5.123 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) stratified by level of study.

Level of degree/diploma	n	%
Bachelors degree	732	80,9
Honours degree	55	6,1
Masters degree	46	5,1
Doctoral degree	6	0,7
General diploma	23	2,5
Advanced diploma	3	0,3
Postgraduate diploma	28	3,1
Other[1]	12	1,3
Total	905	100,0

Number of missing responses = 27.
[1]This subcategory includes part-time students registered for single courses for non-degree purposes (NDP) and visiting foreign students.

(ii) Abridged format

– Patient-specific data

Table 5.124 demonstrates that there was a greater number of undergraduate students than postgraduate students (by 447,1 per cent) who attended the UCT-SHS-MHS from 1991 to 1993.

Table 5.124 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) stratified by undergraduate students versus postgraduate students.

Level of study	n	%
Undergraduate	755	83,4
Postgraduate	138	15,3
Other[1]	12	1,3
Total	905	100,0

Number of missing responses = 27.
[1]This subcategory includes part-time students registered for single courses for non-degree purposes (NDP) and visiting foreign students.

– Clinical/diagnostic-specific data

A: Major diagnostic categories

Table 5.125 demonstrates that undergraduate students were diagnosed as presenting at the UCT-SHS-MHS with a greater number of all major diagnostic categories than postgraduate students (by 295,0 per cent for affective disorders, by 406,8 per cent for adjustment disorders, by 397,1 per cent for V-codes, by 425,0 per cent for anxiety (neurotic) disorders, by 853,3 per cent for "other" disorders and by 439,4 per cent for total (combined) disorders, respectively) – however, only "other" disorders produced a statistically significant (p=0,000) difference. For undergraduate students, adjustment disorder was the most common presenting major diagnostic category as well as the most frequently coded major diagnostic category for postgraduate students. Only "other" disorders produced a statistically significant (p=0,019) result in favour of undergraduate students.

Table 5.125 Major diagnostic categories of undergraduate students (N=755) versus postgraduate students (N=138) presenting at the UCT-SHS-MHS (1991-1993).

Major diagnostic category	Undergraduate		Postgraduate		Unadjusted OR (with 95% CI)	Df	χ^2	p
	n	%	n	%				
Affective disorder	79	10,3	20	14,1	0,7, (0,4- 1,2)	1	1,8	0,185[NS]
Adjustment disorder	223	29,1	44	31,0	0,9 (0,6 - 1,4)	1	0,2	0,653[NS]
V-codes	174	22,7	35	24,6	0,9 (0,6 - 1,4	1	0,3	0,615[NS]
Anxiety (neurotic) disorder	147	19,2	28	19,7	1,0 (0,6 - 1,6)	1	0,0	0,884[NS]
"Other" disorders	143	18,7	15	10,6	1,9 (1,1 - 1,2)	1	5,5	0,019[S]
Total	766	100,0	142	100,0	-	4	6,4	0,169[NS]

Number of missing responses = 27 for patients and 31 for diagnoses.
[1]Includes subcategory "Other".

B: Individual V-codes

Table 5.126 demonstrates that undergraduate students were diagnosed as presenting at the UCT-SHS-MHS with a greater number of all individual V-codes than postgraduate students (by 311,8 per cent for relationship problems, by 633,3 per cent for family problems, by 1 100,0 per cent for complicated bereavements, by 250,0 per cent for pre- and post-termination counselling for unplanned/unwanted pregnancies, by 275,0 per cent for academic problems and by 397,1 per cent for total (combined) V-codes, respectively) – however, none of these individual V-codes produced a statistically significant difference. For undergraduate students, relationship problem was the most common presenting individual V-code as well as the most frequently coded individual V-code for postgraduate students. However, no individual V-code produced a statistically significant result in favour of either undergraduate students or postgraduate students.

Table 5.126 Individual V-codes of undergraduate students (N=755) versus postgraduate students (N=138) presenting at the UCT-SHS-MHS (1991-1993).

Individual V-code	Undergraduate		Postgraduate		Unadjusted OR (with 95% CI)	Df	χ^2	p
	n	%	n	%				
Relationship problem	70	40,2	17	48,6	0,7, (0,3- 1,6)	1	0,8	$0,361^{NS}$
Family problem	44	25,3	6	17,1	1,6 (0,6 - 4,7)	1	1,1	$0,303^{NS}$
Complicated bereavement	24	13,8	2	5,7	2,6 (0,6 - 17,0)	1	1,8	$0,186^{NS}$
Unplanned/unwanted pregnancy	21	12,1	6	17,1	0,7 (0,2 - 2,0)	1	0,7	$0,414^{NS}$
Academic problem	15	8,6	4	11,4	0,7 (0,2 - 2,8)	1	0,3	$0,598^{NS}$
Total V-codes	174	100,0	35	100,0	-	4	3,7	$0,454^{NS}$

Number of missing responses = unknown.
[1]Includes subcategory "Other".

(b) Objective 2 (patients versus controls) and Objective 3 (patients versus the total student community)

Research Hypothesis VIa of the UCT-SHS study is as follows:

> *Undergraduate students are more likely to present with mental disorders at the UCT-SHS-MHS than postgraduates.*

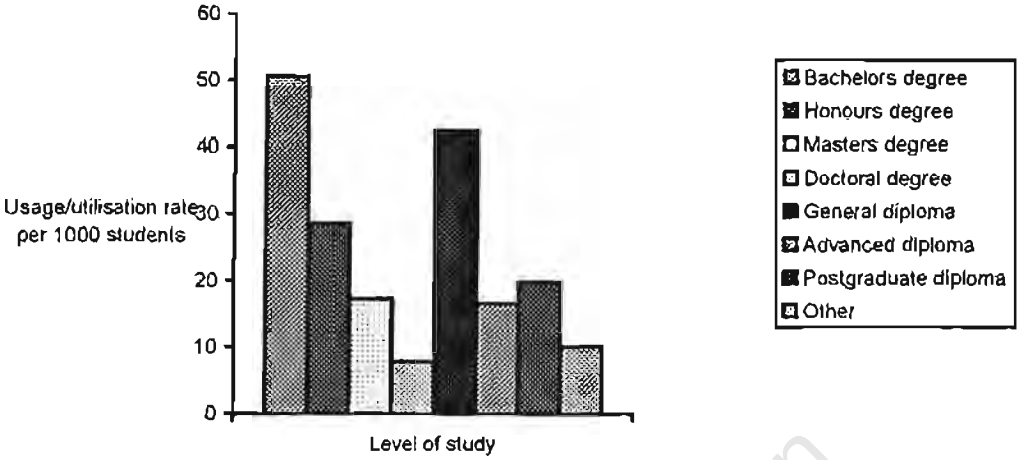
In these objectives Research Hypothesis VIa is either confirmed or rejected according to the unadjusted odds ratio or χ^2 test (p-value) for UCT-SHS-MHS attendees (patients) versus UCT-SHS medical attendees (controls) [Objective 2] or to additional usage/utilisation rates per 1 000 students and utilisation ratios for patients versus registered UCT students (the total student community) [Objective 3].

(i) Non-abridged format

Unadjusted ORs for patients versus controls or patients versus the total student community where the individual subcategory is compared to remaining subcategories by means of contingency (2x2) tables have not been employed for this particular format of the level of study-specific variable.

Figure 5.20 illustrates and Table 5.127 demonstrates that Bachelors degree students have the highest usage/utilisation rate and, consequently, utilisation ratio followed by General Diploma students (both greater than 40,0 attendees per 1 000 students).

Figure 5.20 Usage/utilisation rate per 1 000 students in students presenting at the UCT-SHS-MHS (1991-1993) stratified by level of study



Refer to Table 5.127 for values of usage/utilisation rates.

Table 5.127 Usage/utilisation rate per 1 000 students and utilisation ratio in students presenting at the UCT-SHS-MHS (1991-1993) stratified by level of study.

Level of study	Usage/utilisation rate per 1 000 students	Deviation from mean usage/utilisation rate per 1 000 students	Utilisation ratio
Bachelors degree	50,6	+11,5	1,29
Honours degree	28,6	-10,5	0,73
Masters degree	17,2	-21,9	0,44
Doctoral degree	7,9	-31,2	0,20
General diploma	42,3	+3,2	1,08
Advanced diploma	16,5	-22,6	0,42
Postgraduate diploma	19,7	-19,4	0,50
Other[1]	10,1	-29,0	0,26
Mean	39,1	-	1,00

[1]This subcategory includes part-time students registered for single courses for non-degree purposes (NDP) and visiting foreign students.

(ii) Abridged format

– Patient-specific data

Table 5.128 demonstrates that undergraduate students are only slightly less likely than postgraduate students to present at the UCT-SHS-MHS than attend the UCT-SHS with purely medical complaints which corresponds to a likelihood ratio ($\%_1:\%_2$) of 0,977. In fact, postgraduate students are 8,4 per cent overrepresented (with a standardised residual of +0,9) and undergraduate students are 1,4 per cent underrepresented (-0,4) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0. Adjusted ORs demonstrate that the statistically insignificant relationship between patients and controls is preserved when adjusting for gender, race/population group and age.

However, the results in Table 5.129 suggest that undergraduate students are more likely than postgraduate students to present at the UCT-SHS-MHS as reflected by a statistically significant (p=0,000) positive OR for patients versus the total student community which corresponds to a likelihood ratio ($\%_1$:$\%_3$) of 1,287. Here undergraduate students are 22,6 per cent overrepresented (with a standardised residual of +5,6) and postgraduate students are 50,2 per cent underrepresented (with a standardised residual of -8,4) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0. Adjusted ORs demonstrate that the statistically significant (p=0,000) relationship between patients and the total student community is preserved when adjusting for gender, race/population group and age. These findings therefore reject Research Hypothesis VIa for Objective 2 and confirm Research Hypothesis VIa for Objective 3 of the UCT-SHS study.

Table 5.128 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of controls (N=1 924) stratified by undergraduate students versus postgraduate students.

(a) Unadjusted ORs and $\chi 2$ tests

Level of study	n_1	$\%_1$	n_2	$\%_2$	Unadjusted OR (with 95% CI)	Df	χ^2	p
Undergraduate	755	83,4	1 638	85,4	-	-	-	-
Postgraduate	138	15,3	260	13,6	1,2 (0,9 - 1,4)	1	1,5	0,216[NS]
Other[1]	12	1,3	21	1,1	N/A	N/A	N/A	N/A
Total	905	100,0	1 919	100,0	-	-	-	-

(b) Expected frequencies

Level of study	Observed frequency$_1$	Expected frequency$_1$	Difference between observed and expected frequency$_1$	Observed frequency$_2$	Expected frequency$_2$	Difference between observed and expected frequency$_2$
Undergraduate	755	765,7	-10,7 (-1,4%)	1 638	1 627,3	+10,7 (+0,7%)
Postgraduate	138	127,3	+10,7 (+8,4%)	260	270,7	-10,7 (-4,0%)
Total	893	893,0	-	1 898	1 898,0	-

(c) ORs adjusted for gender, race/population group and age

Variable	SE	Adjusted OR (with 95% CI)	Df	χ^2	Prob >χ^2
Intercept	0,310	[4,904]	1	27,1	0,000[Sig]
Undergraduate	0,131	1,0 (0,8 - 1,3)	1	0,0	0,846[NS]
Model fit	-	-	6	85,6	0,000[Sig]

Number of missing responses = 27 for patients and 5 for controls.

[1]This subcategory which includes part-time students registered for single courses for non-degree purposes (NDP) and visiting foreign students has been excluded from statistical analyses with affected patients and students being entered as missing responses. This methodological decision was taken as these students are not included in Research Hypothesis VIa of the UCT-SHS study which determines the relationship between undergraduate and postgraduate student attendance at the UCT-SHS-MHS.

n_1 and $\%_1$ refer to patients.

Observed frequency$_1$ and expected frequency$_1$ refer to patients.

n_2 and $\%_2$ refer to controls.

Observed frequency$_2$ and expected frequency$_2$ refer to controls.

Table 5.129 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of the total student community (N=23 158) stratified by undergraduate students versus postgraduate students.

(a) Unadjusted ORs and $\chi 2$ tests

Level of study	n_1	$\%_1$	n_3	$\%_3$	Unadjusted OR (with 95% CI)	Df	χ^2	p
Undergraduate	755	83,4	15 015	64,8	2,6 (2,2 - 3,1)	1	112,9	0,000[Sig]
Postgraduate	138	15,3	6 954	30,0	-	-	-	-
Other[1]	12	1,3	1 188	5,1	N/A	N/A	N/A	N/A
Total	905	100,0	23 157	100,0	-	-	-	-

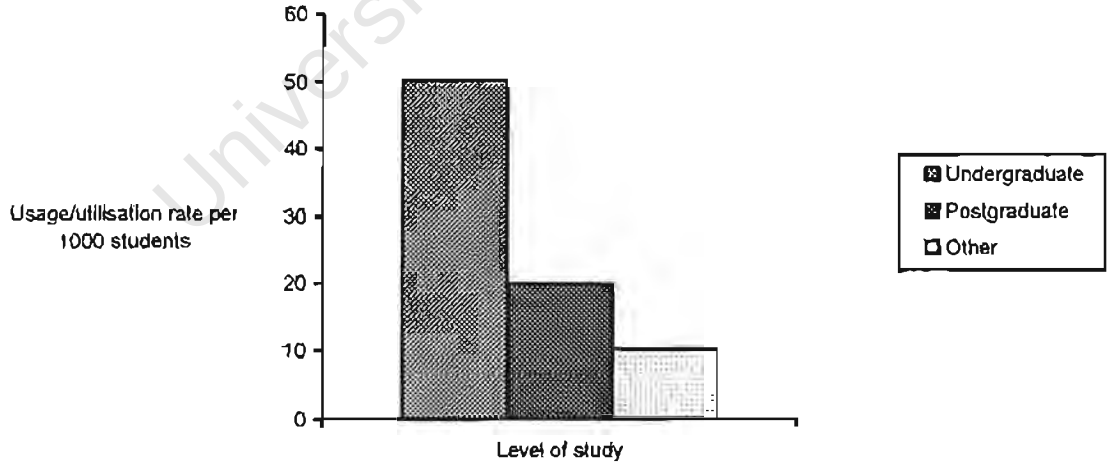
(b) Expected frequencies						
Level of study	Observed frequency$_1$	Expected frequency$_1$	Difference between observed and expected frequency$_1$	Observed frequency$_3$	Expected frequency$_3$	Difference between observed and expected frequency$_3$
Undergraduate	755	616,0	+139,0 (+22,6%)	15 015	15 154,0	-139,0 (-0,9%)
Postgraduate	138	277,0	-139,0 (-50,2%)	6 954	6 815,0	+139,0 (+2,0%)
Total	893	893,0	-	21 969	21 969,0	-

(c) ORs adjusted for gender, race/population group and age					
Variable	SE	Adjusted OR (with 95% CI)	Df	χ^2	Prob>χ^2
Intercept	0,227	[14,462]	1	138,4	0,000[Sig]
Undergraduate	0,116	2,3 (1,8 – 2,9)	1	51,5	0,000[Sig]
Model fit	-	-	6	359,7	0,000[Sig]

Number of missing responses = 27 for patients and 1 for total student community.
[1]This subcategory which includes part-time students registered for single courses for non-degree purposes (NDP) and visiting foreign students has been excluded from statistical analyses with affected patients and controls being entered as missing responses. This methodological decision was taken as these students are not included in Research Hypothesis VIa of the UCT-SHS study which determines the relationship between undergraduate and postgraduate student attendance at the UCT-SHS-MHS.
n_1 and $\%_1$ refer to patients.
Observed frequency$_1$ and expected frequency$_1$ refer to patients.
n_3 and $\%_3$ refer to the total student community.
Observed frequency$_3$ and expected frequency$_3$ refer to the total student community.

Figure 5.21 illustrates and Table 5.130 demonstrates that undergraduate students have a considerably higher usage/utilisation rate and, consequently, utilisation ratio than postgraduate students (by 154,0 and 152,9 per cent, respectively). This patient-specific finding, therefore, is compatible with Research Hypothesis VIa of the UCT-SHS study.

Figure 5.21 Usage/utilisation rate per 1 000 students in students presenting at the UCT-SHS-MHS (1991-1993) stratified by undergraduate students versus postgraduate students.



Refer to Table 5.130 for values of usage/utilisation rates.

Table 5.130 Usage/utilisation rate per 1 000 students and utilisation ratio in students presenting at the UCT-SHS-MHS (1991-1993) stratified by undergraduate students versus postgraduate students

Level of study	Usage/utilisation rate per 1 000 students	Deviation from mean usage/utilisation rate per 1 000 students	Utilisation ratio
Undergraduate	50,3	+11,2	1,29
Postgraduate	19,8	-19,3	0,51
Other[1]	10,1	-29,0	0,26
Mean	39,1	-	1,00

[1]This subcategory includes part-time students registered for single courses for non-degree purposes (NDP) and visiting foreign students.

– Clinical/diagnostic-specific data

A: Major diagnostic categories

Table 5.131 demonstrates that, for all major diagnostic categories, undergraduate students have a generally considerably higher usage/utilisation (prevalence) rate and, consequently, utilisation (prevalence) ratio than postgraduate students (by 82,8 and 83,6 per cent for affective disorder, by 136,5 and 137,0 per cent for adjustment disorder, by 132,0 and 133,3 per cent for V-codes, by 145,0 and 143,4 per cent for anxiety (neurotic) disorder, by 331,8 and 331,3 per cent for "other" disorders and by 150,0 and 151,0 per cent for total (combined) disorders). These clinical findings therefore are consistent with Research Hypothesis VIa for all major diagnostic categories employed in the UCT-SHS study.

Table 5.131 Usage/utilisation (prevalence) rate per 1 000 students and utilisation (prevalence) ratio for major diagnostic categories in students presenting at the UCT-SHS-MHS (1991-1993) stratified by undergraduate students versus postgraduate students.

(a) Affective disorder			
Level of study	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Undergraduate	5,3	+1,0	1,23
Postgraduate	2,9	-1,4	0,67
Other[1]	0,8	-3,5	0,19
Mean	4,3	-	1,00
(b) Adjustment disorder			
Level of study	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Undergraduate	14,9	+3,3	1,28
Postgraduate	6,3	-5,3	0,54
Other[1]	4,2	-7,4	0,36
Mean	11,6	-	1,00
(c) V-codes			
Level of study	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Undergraduate	11,6	+2,4	1,26
Postgraduate	5,0	-4,2	0,54
Other[1]	2,5	-6,7	0,27
Mean	9,2	-	1,00

(d) Anxiety (neurotic) disorder			
Level of study	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Undergraduate	9,8	+2,2	1,29
Postgraduate	4,0	-3,6	0,53
Other[1]	0,8	-6,8	0,11
Mean	7,6	-	1,00
(e) "Other" disorders			
Level of study	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Undergraduate	9,5	+2,6	1,38
Postgraduate	2,2	-4,7	0,32
Other[1]	1,7	-5,2	0,25
Mean	6,9	-	1,00
(f) Total (combined) disorders			
Level of study	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Undergraduate	51,0	+11,3	1,28
Postgraduate	20,4	-19,3	0,51
Other[1]	10,1	-29,6	0,25
Mean	39,7	-	1,00

Number of missing responses = 27 for patients and 31 for diagnoses.
[1]This subcategory includes part-time students registered for single courses for non-degree purposes (NDP) and visiting foreign students.

B: Individual V-codes

Table 5.132 demonstrates that, for all individual V-codes, undergraduate students have a generally considerably higher usage/utilisation (prevalence) rate and, consequently, utilisation (prevalence) ratio than postgraduate students (by 95,8 and 96,8 per cent for relationship problem, by 222,2 and 222,0 per cent for family problem, by 433,3 and 437,0 per cent for complicated bereavement, by 55,6 and 56,0 per cent for pre- and post-termination counselling for unplanned/unwanted pregnancy, by 66,7 and 65,7 per cent for academic problem and by 132,0 and 133,3 per cent for total (combined) V-codes. These clinical findings therefore are consistent with Research Hypothesis VIa for all individual V-codes employed in the UCT-SHS study.

Table 5.132 Usage/utilisation (prevalence) rate per 1 000 students and utilisation (prevalence) ratio for individual V-codes in students presenting at the UCT-SHS-MHS (1991-1993) stratified by undergraduate students versus postgraduate students.

(a) Relationship problem			
Level of study	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Undergraduate	4,7	+0,9	1,24
Postgraduate	2,4	-1,4	0,63
Other[1]	0,8	-3,0	0,21
Mean	3,8	-	1,00
(b) Family problem			
Level of study	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Undergraduate	2,9	+0,7	1,32
Postgraduate	0,9	-1,3	0,41
Other[1]	0,0	-2,2	0,00
Mean	2,2	-	1,00

(c) Complicated bereavement			
Level of study	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Undergraduate	1,6	+0,5	1,45
Postgraduate	0,3	-0,8	0,27
Other[1]	0,0	-1,1	0,00
Mean	1,1	-	1,00
(d) Pre- and post-termination counselling for unplanned/unwanted pregnancy			
Level of study	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Undergraduate	1,4	+0,2	1,17
Postgraduate	0,9	-0,3	0,75
Other[1]	0,8	-0,4	0,67
Mean	1,2	-	1,00
(e) Academic problem			
Level of study	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Undergraduate	1,0	+0,1	1,11
Postgraduate	0,6	-0,3	0,67
Other[1]	0,8	-0,1	0,89
Mean	0,9	-	1,00
(f) Total (combined) V-codes			
Level of study	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Undergraduate	11,6	+2,4	1,26
Postgraduate	5,0	-4,2	0,54
Other[1]	2,5	-6,7	0,27
Mean	9,2	-	1,00

Number of missing responses =unknown.
[1]This subcategory includes part-time students registered for single courses for non-degree purposes (NDP) and visiting foreign students.

(c) Objective 4 (number of consultations)

Research Hypothesis VIb of the UCT-SHS study is as follows:

> *Undergraduate students are likely to require more consultations for mental disorders at the UCT-SHS-MHS than postgraduates.*

In this objective Research Hypothesis VIb is either confirmed or rejected according to the mean number of consultations for UCT-SHS-MHS attendees (patients).

(i) Non-abridged format

Table 5.133 demonstrates that 3 441 individual consultations were made by 905 documented patients attending the UCT-SHS-MHS from 1991 to 1993 – a mean of 3,8 consultations per patient with a range of 1 to 29 consultations. Masters degree students were responsible for the highest mean number of consultations per student followed by Doctoral degree students (all greater or equal to 4,0 consultations per patient). Bachelors students, on the other hand, were responsible for the highest total number of consultations followed by Masters and Doctoral degree students (all greater than 200 consultations).

Table 5.133 Frequency, percentages, mean number and range of consultations (N=3 441) in students presenting at the UCT-SHS-MHS (1991-1993) stratified by level of study.

Level of study	n	%	No. of cons		Range
			mean	SD	
Bachelors degree	2 774	80,6	3,8	3,5	1 to 29 consultations
Honours degree	209	6,1	3,8	3,7	1 to 16 consultations
Masters degree	228	6,6	5,0	4,3	1 to 23 consultations
Doctoral degree	24	0,7	4,0	3,3	1 to 9 consultations
General diploma	82	2,4	3,6	3,5	1 to 14 consultations
Advanced diploma	9	0,3	3,0	2,6	1 to 6 consultations
Postgraduate diploma	79	2,3	2,8	2,3	1 to 11 consultations
Other[1]	36	1,0	3,0	3,1	1 to 11 consultations
Total	3 441	100,0	3,8	3,6	1 to 29 consultations

Number of missing responses = 27 for patients.
[1]This subcategory includes part-time students registered for single courses for non-degree purposes (NDP) and visiting foreign students.

(ii) Abridged format

Table 5.134 demonstrates that the mean number of consultations per student is higher for postgraduate students than for undergraduate students (by 5,3 per cent) while the total number of consultations is higher for undergraduate students than postgraduate students (by 420,2 per cent) who attend the UCT-SHS-MHS from 1991 to 1993. The level of study-specific difference between the mean number of consultations per patient is statistically insignificant. This finding therefore rejects Research Hypothesis VIb for Objective 4 of the UCT-SHS study.

Table 5.134 Frequency, percentages, mean number and range of consultations (N=3 441) in students presenting at the UCT-SHS-MHS (1991-1993) stratified by undergraduate students versus postgraduate students.

Level of study	n	%	No. of cons		Range	Df	t	p
			mean	SD				
Undergraduate	2 856	83,0	3,8	3,5	1 to 29 consultations	891,0	-0,59	$0,556^{NS}$
Postgraduate	549	16,0	4,0	3,7	1 to 23 consultations	-	-	-
Other[1]	36	1,0	3,0	3,1	1 to 11 consultations	-	-	-
Total/Ho	3 441	100,0	3,8	3,5	1 to 29 consultations	-	-	-

Number of missing responses = 27 for patients.
[1]This subcategory includes part-time students registered for single courses for non-degree purposes (NDP) and visiting foreign students.

5.1.3.3 Year of study

(a) Objective 1 (attendees) – Descriptive data

(i) Non-abridged format

Table 5.135 demonstrates that first year (freshman/fresher) students were responsible for the greatest (by double) number of attendees at the UCT-SHS-MHS from 1991 to 1993 followed (somewhat distantly) by second and third year students (all greater than 100 attendees).

Table 5.135 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) stratified by year of study.

Year of study	n	%
First year	474	52,4
Second year	239	26,4
Third year	120	13,3
Fourth year	13	1,4
Fifth year	1	0,1
Sixth year	1	0,1
Other[1]	57	6,3
Total	905	100,0

Number of missing responses = 27.
[1]This subcategory includes part-time students registered for single courses for non-degree purposes (NDP) and visiting foreign students as well as Masters and Doctoral degrees by dissertation only.

(ii) Abridged format

– Patient-specific data

Table 5.136 demonstrates that there was a greater number of first year (freshman/fresher) students than non-first year (02 to 06) students (by 26,7 per cent) who attended the UCT-SHS-MHS from 1991 to 1993.

Table 5.136 Frequency and percentages of students (N=932) presenting at the UCT-SHS-MHS (1991-1993) stratified by first year (freshman/fresher) students versus non-first (02 to 06) year students.

Year of study	n	%
First year	474	52,4
Non-first year	374	41,3
Other[1]	57	6,3
Total	905	100,0

Number of missing responses = 27.
[1]This subcategory includes part-time students registered for single courses for non-degree purposes (NDP) and visiting foreign students as well as Masters and Doctoral degrees by dissertation only.

– Clinical/diagnostic-specific data

A: Major diagnostic categories

Table 5.137 demonstrates that first year (freshman/fresher) students were diagnosed as presenting at the UCT-SHS-MHS with a greater number of adjustment disorders, V-codes, "other" disorders and total (combined) disorders than non-first (02 to 06) year students (by 24,1; 51,9; 65,5 and 27,4 per cent, respectively) – however, only V-codes produced a statistically significant (p=0,000) difference. On the other hand, non-first (02 to 06) year students recorded more anxiety (neurotic) disorders than first year (freshman/fresher) students (by 2,4 per cent) – however, this difference was not statistically significant. The number of diagnoses for the major diagnostic category of affective disorders were tied. For first year (freshman/fresher) students, adjustment disorder was the most common presenting major diagnostic category as well as the most frequently coded major diagnostic category for non-first (02 to 06) year students.

However, no major diagnostic category produced a statistically significant result in favour of either first year (freshman/fresher) students or non-first (02 to 06) year students.

Table 5.137 Major diagnostic categories of first year (freshman/fresher) students (N=474) versus non-first (02 to 06) year students (N=374) presenting at the UCT-SHS-MHS (1991-1993).

Major diagnostic category	First year		Non-first year		Unadjusted OR (with 95% CI)	Df	χ^2	p
	n	%	n	%				
Affective disorder	45	9,3	45	11,9	0,8 (0,5 – 1,2)	1	1,5	0,223^{NS}
Adjustment disorder	139	28,8	112	29,6	1,0 (0,7 – 1,3)	1	0,1	0,804^{NS}
V-codes	120	24,8	79	20,8	1,3 (0,9 – 1,8)	1	1,9	0,166^{NS}
Anxiety (neurotic) disorder	83	17,2	85	22,4	0,7 (0,5 – 1,0)	1	3,7	0,054^{NS}
"Other" disorders	96	19,9	58	15,3	1,4 (1,0 – 2,0)	1	3,0	0,082^{NS}
Total	483	100,0	379	100,0	-	4	8,3	0,080^{NS}

Number of missing responses = 27 for patients and 31 for diagnoses.
[1]Includes subcategory "Other".

B: Individual V-codes

Table 5.138 demonstrates that first year (freshman/fresher) students were diagnosed as presenting at the UCT-SHS-MHS with a greater number of relationship problems, family problems, pre- and post-termination counselling for unplanned/unwanted pregnancies, academic problems and total (combined) V-codes than non-first (02 to 06) year students (by 31,4; 135,7; 125,0; 116,7 and 51,9 per cent, respectively) – however, none of these individual V-codes produced a statistically significant difference. On the other hand, non-first (02 to 06) year students recorded more complicated bereavements than first year (freshman/fresher) students (by 60,0 per cent) – however, this difference was statistically significant (p=0,015). For first year (freshman/fresher) students, relationship problem was the most common presenting individual V-code as well as the most frequently coded individual V-code for non-first (02 to 06) year students. Only complicated bereavement produced a statistically significant (p=0,015) result in favour of non-first (02 to 06) year students.

Table 5.138 Individual V-codes of first year (freshman/fresher) students (N=474) versus non-first (02 to 06) year students (N=374) presenting at the UCT-SHS-MHS (1991-1993).

Individual V-code	First year		Non-first year		Unadjusted OR (with 95% CI)	Df	χ^2	p
	n	%	n	%				
Relationship problem	46	38,3	35	44,3	0,8 (0,4 - 1,51)	1	0,7	0,402^{NS}
Family problem	33	27,5	14	17,7	1,8 (0,8 - 3,8)	1	2,5	0,112^{NS}
Complicated bereavement	10	8,3	16	20,3	0,4 (0,1 - 0,9)	1	6,0	0,015^{Sig}
Unplanned/unwanted pregnancy	18	15,0	8	10,1	1,6 (0,6 - 4,2)	1	1,0	0,318^{NS}
Academic problem	13	10,8	6	7,6	1,5 (0,5 - 4,6)	1	0,6	0,447^{ns}
Total V-codes	120	100,0	79	100,0	-	4	8,9	0,063^{ns}

Number of missing responses = unknown.
[1]Includes subcategory "Other".

(b) Objective 2 (patients versus controls) and Objective 3 (patients versus the total student community)

Research Hypothesis VIIa of the UCT-SHS study is as follows:

> *First year (freshman/fresher) students are more likely to present with mental disorders at the UCT-SHS-MHS than their non-first year (02 to 06) peers.*

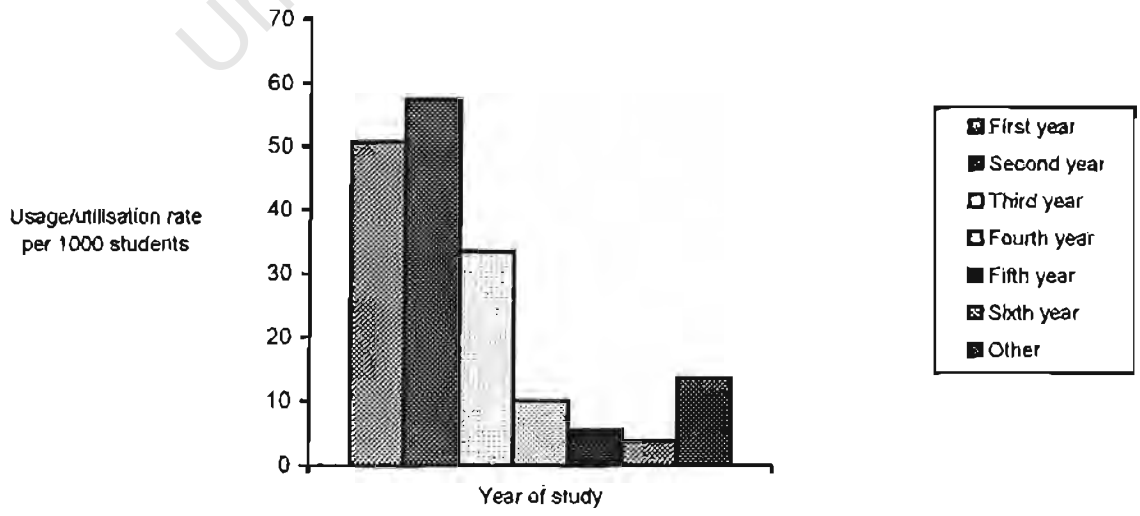
In these objectives Research Hypothesis VIIa is either confirmed or rejected according to the unadjusted odds ratio or χ^2 test (p-value) for UCT-SHS-MHS attendees (patients) versus UCT-SHS medical attendees (controls) [Objective 2] or to additional usage/utilisation rates per 1 000 students and utilisation ratios for patients versus registered UCT students (the total student community) [Objective 3].

(i) Non-abridged format

Unadjusted ORs for patients versus controls or patients versus the total student community where the individual subcategory is compared to remaining subcategories by means of contingency (2x2) tables have not been employed for this particular format of the year of study-specific variable.

Figure 5.22 illustrates and Table 5.139 demonstrates that second year students have the highest usage/utilisation rate and, consequently, utilisation ratio followed by first year (freshman/fresher) students (both greater than 50,0 attendees per 1 000 students).

Figure 5.22 Usage/utilisation rate per 1 000 students in students presenting at the UCT-SHS-MHS (1991-1993) stratified by year of study.



Refer to Table 5.139 for values of usage/utilisation rates.

Table 5.139 Usage/utilisation rate per 1 000 students and utilisation ratio in students presenting at the UCT-SHS-MHS (1991-1993) stratified by year of study.

Year of study	Usage/utilisation rate per 1 000 students	Deviation from mean usage/utilisation rate per 1 000 students	Utilisation ratio
First year	50,6	+11,5	1,29
Second year	57,3	+18,2	1,47
Third year	33,4	-5,7	0,85
Fourth year	10,0	-29,1	0,26
Fifth year	5,5	-33,6	0,14
Sixth year	3,7	-35,4	0,09
Other	13,4	-25,7	0,34
Mean	39,1	-	1,00

[1]This subcategory includes part-time students registered for single courses for non-degree purposes (NDP) and visiting foreign students as well as Masters and Doctoral degrees by dissertation only.

(ii) Abridged format

– Patient-specific data

Table 5.140 demonstrates that first year (freshman/fresher) students are only slightly less likely than non-first year (02 to 06) students to present at the UCT-SHS-MHS than attend the UCT-SHS with purely medical complaints which corresponds to a likelihood ratio ($\%_1:\%_2$) of 0,944. In fact, non-first year (02 to 06) students are 5,5 per cent overrepresented (with a standardised residual of +1,0) and first year (freshman/fresher) students are 4,0 per cent underrepresented (with a standardised residual of -0,9) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0. Adjusted ORs demonstrate that the statistically insignificant relationship between patients and controls is preserved when adjusting for gender, race/population group and age.

However, the results in Table 5.141 suggest that first year (freshman/fresher) students are more likely than non-first year (02 to 06) students to present at the UCT-SHS-MHS as reflected by a statistically significant (p=0,000) positive OR for patients versus the total student community which corresponds to a likelihood ratio ($\%_1:\%_3$) of 1,294. Here first year (freshman/fresher) students are 12,1 per cent overrepresented (with a standardised residual of +2,5) and non-first year (02 to 06) students 12,0 per cent underrepresented (with a standardised residual of -2,5) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on and OR of 1,0. Adjusted ORs demonstrate that the statistically significant (p=0,000) relationship between patients and controls is preserved when adjusting for gender, race/population group and age. These findings therefore reject Research Hypothesis VIIa for Objective 2 and confirm Research Hypothesis VIIa for Objective 3 of the UCT-SHS study.

Table 5.140 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of controls (N=1 924) stratified by first year (freshman/fresher) students versus non-first (02 to 06) year students.

(a) Unadjusted ORs and $\chi 2$ tests

Year of study	n_1	$\%_1$	n_2	$\%_2$	Unadjusted OR (with 95% CI)	Df	χ^2	p
First year	474	52,4	1 064	55,5	-	-	-	-
Non-first year	374	41,3	731	38,1	1,1 (1,0 - 1,4)	1	2,7	$0,100^{NS}$
Other[1]	57	6,3	124	6,5	N/A	N/A	N/A	N/A
Total	905	100,0	1 919	100,0	-	-	-	-

(b) Expected frequencies

Year of study	Observed frequency$_1$	Expected frequency$_1$	Difference between observed and expected frequency$_1$	Observed frequency$_2$	Expected frequency$_2$	Difference between observed and expected frequency$_2$
First year	474	493,5	-19,5 (-4,0%)	1 064	1 044,5	+19,5 (+1,9%)
Non-first year	374	354,5	+19,5 (+5,5%)	731	750,5	-19,5 (-2,6%)
Total	848	848,0	-	1 795	1 795,0	-

(c) ORs adjusted for gender, race/population group and age

Variable	SE	Adjusted OR (with 95% CI)	Df	χ^2	Prob $>\chi^2$
Intercept	0,335	[5,711]	1	27,1	$0,000^{Sig}$
First year	0,088	0,9 (0,8 - 1,1)	1	0,4	$0,536^{NS}$
Model fit	-	-	6	79,8	$0,000^{Sig}$

Number of missing responses = 27 for patients and 5 for controls.

[1]This subcategory which includes part-time students registered for single courses for non-degree purposes (NDP) and visiting foreign students as well as Masters and Doctoral degrees by dissertation only has been excluded from statistical analyses with affected patients and controls being entered as missing responses. This methodological decision was taken as these students are not included in Research Hypothesis VIIa of the UCT-SHS study which determines the relationship between first year (freshman/fresher) student and non-first (02 to 06) year student attendance at the UCT-SHS-MHS.

n_1 and $\%_1$ refer to patients.

Observed frequency$_1$ and expected frequency$_1$ refer to patients.

n_2 and $\%_2$ refer to controls.

Observed frequency$_2$ and expected frequency$_2$ refer to controls.

Table 5.141 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of total student community (N=23 158) stratified by first year (freshman/fresher) students versus non-first (02 to 06) year students.

(a) Unadjusted ORs and $\chi 2$ tests

Year of study	n_1	$\%_1$	n_3	$\%_3$	Unadjusted OR (with 95% CI)	Df	χ^2	p
First year	474	52,4	9 376	40,5	1,3 (1,1 - 1,5)	1	14,1	$0,000^{Sig}$
Non-first year	374	41,3	9 525	41,1	-	-	-	-
Other[1]	57	6,3	4 257	18,4	N/A	N/A	N/A	N/A
Total	905	100,0	23 158	100,0	-	-	-	-

(b) Expected frequencies

Year of study	Observed frequency$_1$	Expected frequency$_1$	Difference between observed and expected frequency$_1$	Observed frequency$_3$	Expected frequency$_3$	Difference between observed and expected frequency$_3$
First year	474	422,9	+51,1 (+12,1%)	9 376	9 427,1	-51,1 (-0,5%)
Non-first year	374	425,1	-51,1 (-12,0%)	9 525	9 473,9	+51,1 (+0,5%)
Total	848	848,0	-	18 901	18 901,0	-

(c) ORs adjusted for gender, race/population group and age

Variable	SE	Adjusted OR (with 95% CI)	Df	χ^2	Prob $>\chi^2$
Intercept	0,260	[19,867]	1	132,2	$0,000^{Sig}$
First year	0,072	1,2 (1,0 - 1,4)	1	5,1	$0,024^{Sig}$
Model fit	-	-	6	231,2	$0,000^{Sig}$

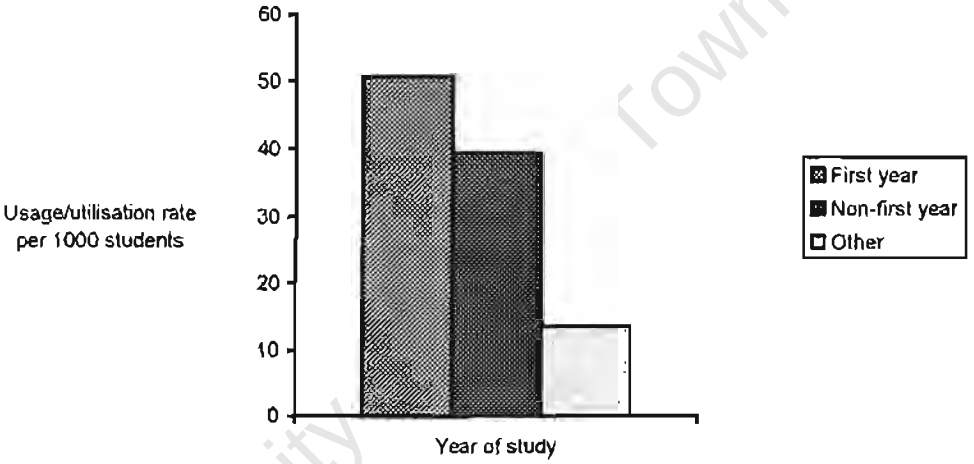
Number of missing responses = 27 for patients.

[1]This subcategory which includes part-time students registered for single courses for non-degree purposes (NDP) and visiting foreign students as well as Masters and Doctoral degrees by dissertation only has been excluded from statistical analyses with affected patients and students being entered as missing responses. This methodological decision was taken as these students are not included in Research Hypothesis VIIa of the UCT-SHS study which determines the relationship between first year (freshman/fresher) student and non-first (02 to 06) year student attendance at the UCT-SHS-MHS

n_1 and $\%_1$ refer to patients.
Observed frequency$_1$ and expected frequency$_1$ refer to patients.
n_3 and $\%_3$ refer to the total student community
Observed frequency$_3$ and expected frequency$_3$ refer to the total student community.

Figure 5.23 illustrates and Table 5.142 demonstrates that first year (freshman/fresher) students have a somewhat higher usage/utilisation rate and, consequently, utilisation ratio than non-first year (02 to 06) students (by 28,8 and 27,7 per cent, respectively). This patient-specific finding, therefore, is compatible with Research Hypothesis VIIa of the UCT-SHS study.

Figure 5.23 Usage/utilisation rate per 1 000 students in students presenting at the UCT-SHS-MHS (1991-1993) stratified by first year (freshman/fresher) students versus non-first (02 to 06) year students.



Refer to Table 5.142 for values of usage/utilisation rates.

Table 5.142 Usage/utilisation rate per 1 000 students and utilisation ratio in students presenting at the UCT-SHS-MHS (1991-1993) stratified by first year (freshman/fresher) students versus non-first (02 to 06) year students.

Year of study	Usage/utilisation rate per 1 000 students	Deviation from mean usage/utilisation rate per 1 000 students	Utilisation ratio
First year	50,6	+11,5	1,29
Non-first year	39,3	+0,2	1,01
Other[1]	13,4	-25,7	0,34
Mean	39,1	-	1,00

[1]This subcategory includes part-time students registered for single courses for non-degree purposes (NDP) and visiting foreign students as well as Masters and Doctoral degrees by dissertation only.

– Clinical/diagnostic-specific data

A: Major diagnostic categories

Table 5.143 demonstrates that, for affective disorder, adjustment disorder, V-codes, "other" disorders and total (combined) disorders, first year (freshman/fresher) students have a generally considerably higher

usage/utilisation (prevalence) rate and, consequently, utilisation (prevalence) ratio than non-first (02 to 06) year students (by 2,1 and 2,8 per cent for affective disorder, by 25,4 and 25,5 per cent for adjustment disorder, by 54,2 and 54,4 per cent for V-codes, by 9,0 and 9,3 per cent for "other" disorders and by 67,2 and 68,2 per cent for total (combined) disorders). The only exception to this trend is anxiety (neurotic) disorder where the usage/utilisation (prevalence) rate and utilisation (prevalence) ratio are 0,8 and 0,0 per cent, respectively, higher for non-first (02 to 06) year students. These clinical findings therefore are consistent with Research Hypothesis VIIa for affective disorder, adjustment disorder, V-codes, "other" disorders and total (combined) disorders but are not consistent with Research Hypothesis VIIa for anxiety (neurotic) disorder.

Table 5.143 Usage/utilisation (prevalence) rate per 1 000 students and utilisation (prevalence) ratio for major diagnostic categories in students presenting at the UCT-SHS-MHS (1991-1993) stratified by first year (freshman/fresher) students versus non-first (02 to 06) year students.

(a) Affective disorder			
Year of study	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
First year	4,8	+0,5	1,12
Non-first year	4,7	+0,4	1,09
Other[1]	2,3	-2,0	0,53
Mean	4,3	-	1,00
(b) Adjustment disorder			
Year of study	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
First year	14,8	+3,2	1,28
Non-first year	11,8	+0,2	1,02
Other[1]	4,9	-6,7	0,42
Mean	11,6	-	1,00
(c) V-codes			
Year of study	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
First year	12,8	+3,6	1,39
Non-first year	8,3	-0,9	0,90
Other[1]	3,1	-6,1	0,34
Mean	9,2	-	1,00
(d) Anxiety (neurotic) disorder			
Year of study	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
First year	8,9	+1,3	1,17
Non-first year	8,9	+1,3	1,17
Other[1]	1,9	-5,7	0,25
Mean	7,6	-	1,00
(e) "Other" disorders			
Year of study	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
First year	10,2	+3,3	1,48
Non-first year	6,1	-0,8	0,88
Other[1]	1,4	-5,5	0,20
Mean	6,9	-	1,00

(f) Total (combined) disorders			
Year of study	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
First year	51,5	+11,8	1,30
Non-first year	39,8	+0,1	1,00
Other[1]	13,6	-26,1	0,34
Mean	39,7	-	1,00

Number of missing responses = 27 for patients and 31 for diagnoses.
[1]This subcategory includes part-time students registered for single courses for non-degree purposes (NDP) and visiting foreign students as well as Masters and Doctoral degrees by dissertation only.

B: Major diagnostic categories

Table 5.144 demonstrates that, for relationship problem, family problem, pre- and post-termination counselling for unplanned/unwanted pregnancy, academic problem and total (combined) V-codes, first year (freshman/fresher) students have a generally considerably higher usage/utilisation (prevalence) rate and, consequently, utilisation (prevalence) ratio than non-first (02 to 06) year students (by 32,4 and 33,0 per cent for relationship problem, by 133,3 and 133,8 per cent for family problem, by 137,5 and 135,8 per cent for pre- and post-termination counselling for unplanned/unwanted pregnancy, by 133,3 and 132,8 per cent for academic problem and by 54,2 and 54,4 per cent for total (combined) V-codes. The only exception to this trend is complicated bereavement where the usage/utilisation (prevalence) rate and utilisation (prevalence) ratio are 54,5 and 55,0 per cent, respectively, higher for non-first (02 to 06) year students. These clinical findings therefore are consistent with Research Hypothesis VIIa for relationship problem, family problem, pre- and post-termination counselling for unplanned/unwanted pregnancy, academic problem and total (combined) V-codes but are not consistent with Research Hypothesis VIIa for complicated bereavement.

Table 5.144 Usage/utilisation (prevalence) rate per 1 000 students and utilisation (prevalence) ratio for individual V-codes in students presenting at the UCT-SHS-MHS (1991-1993) stratified by first year (freshman/fresher) students versus non-first (02 to 06) year students.

(a) Relationship problem			
Year of study	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
First year	4,9	+1,1	1,29
Non-first year	3,7	-0,1	0,97
Other[1]	1,6	-2,2	0,42
Mean	3,8	-	1,00
(b) Family problem			
Year of study	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
First year	3,5	+1,3	1,59
Non-first year	1,5	-0,7	0,68
Other[1]	0,7	-1,5	0,32
Mean	2,2	-	1,00
(c) Complicated bereavement			
Year of study	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
First year	1,1	+0,0	1,00
Non-first year	1,7	+0,6	1,55
Other[1]	0,0	-1,1	0,00
Mean	1,1	-	1,00

(d) Pre- and post-termination counselling for unplanned/unwanted pregnancy			
Year of study	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
First year	1,9	+0,7	1,58
Non-first year	0,8	-0,4	0,67
Other[1]	0,5	-0,7	0,42
Mean	1,2	-	1,00
(e) Academic problem			
Year of study	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
First year	1,4	+0,5	1,56
Non-first year	0,6	-0,3	0,67
Other[1]	0,2	-0,7	0,22
Mean	0,9	-	1,00
(f) Total (combined) V-codes			
Year of study	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
First year	12,8	+3,6	1,39
Non-first year	8,3	-0,9	0,90
Other[1]	3,1	-6,1	0,34
Mean	9,2	-	1,00

Number of missing responses = unknown.
[1]This subcategory includes part-time students registered for single courses for non-degree purposes (NDP) and visiting foreign students as well as Masters and Doctoral degrees by dissertation only.

(c) Objective 4 (number of consultations)

Research Hypothesis VIIb of the UCT-SHS study is as follows:

> *First year (freshman/fresher) students are likely to require more consultations for mental disorders at the UCT-SHS-MHS than their non-first year (02 to 06) peers.*

In this objective Research Hypothesis VIIb is either confirmed or rejected according to the mean number of consultations for UCT-SHS-MHS attendees (patients).

(i) Non-abridged format

Table 5.145 demonstrates that 3 441 individual consultations were made by 905 documented patients attending the UCT-SHS-MHS from 1991 to 1993 – a mean of 3,8 consultations per patient with a range of 1 to 29 consultations. Fifth year students were responsible for the highest mean number of consultations per student followed by second year and "Other" students (all greater or equal to 4,0 consultations per patient). First year (freshman/fresher) students, on the other hand, were responsible for the highest total number of consultations followed by second and third year students (all greater than 400 consultations).

Table 5.145 Frequency, percentages, mean number and range of consultations (N=3 441) in students presenting at the UCT-SHS-MHS (1991-1993) stratified by year of study.

Year of study	n	%	No. of cons		Range
			mean	SD	
First year	1 801	52,3	3,8	3,4	1 to 21 consultations
Second year	954	27,7	4,0	4,0	1 to 29 consultations
Third year	407	11,8	3,4	2,9	1 to 14 consultations
Fourth year	45	1,3	3,5	3,0	1 to 9 consultations
Fifth year	6	0,2	6,0	N/A	6 to 6 consultations
Sixth year	1	0,0	1,0	N/A	1 to 1 consultations
Other[1]	227	6,6	4,0	3,3	1 to 15 consultations
Total	3 441	100,0	3,8	3,5	1 to 29 consultations

Number of missing responses = 27 for patients.
[1]This subcategory includes part-time students registered for single courses for non-degree purposes (NDP) and visiting foreign students as well as Masters and Doctoral degrees by dissertation only.

(ii) Abridged format

Table 5.146 demonstrates that the mean number of consultations per student and the total number of consultations is higher for first year (freshman/fresher) students than non-first year (02 to 06) students (by 0,5 and 27,5 per cent, respectively) who attend the UCT-SHS-MHS from 1991 to 1993. The year of study-specific difference between the mean number of consultations per patient is statistically insignificant. This finding therefore rejects Research Hypothesis VIIb for Objective 4 of the UCT-SHS study.

Table 5.146 Frequency, percentages, mean number and range of consultations (N=3 441) in students presenting at the UCT-SHS-MHS (1991-1993) stratified by first year (freshman/fresher) students versus non-first (02 to 06) year students.

Year of study	n	%	No. of cons		Range	Df	t	ρ
			mean	SD				
First year	1 801	52,3	3,8	3,4	1 to 21 consultations	846,0	0,122	$0,903^{NS}$
Non-first year	1 413	41,1	3,8	3,6	1 to 29 consultations	-	-	-
Other[1]	227	6,6	4,0	3,3	1 to 15 consultations	-	-	-
Total/Ho	3 441	100,0	3,8	3,5	1 to 29 consultations	-	-	-

Number of missing responses = 27.
[1]This subcategory includes part-time students registered for single courses for non-degree purposes (NDP) and visiting foreign students as well as Masters and Doctoral degrees by dissertation only.

5.1.4 Residence (home address)

5.1.4.1 Objective 1 (attendees) – Descriptive data

(a) Non-abridged format

(i) PCGs within metropolitan Cape Town

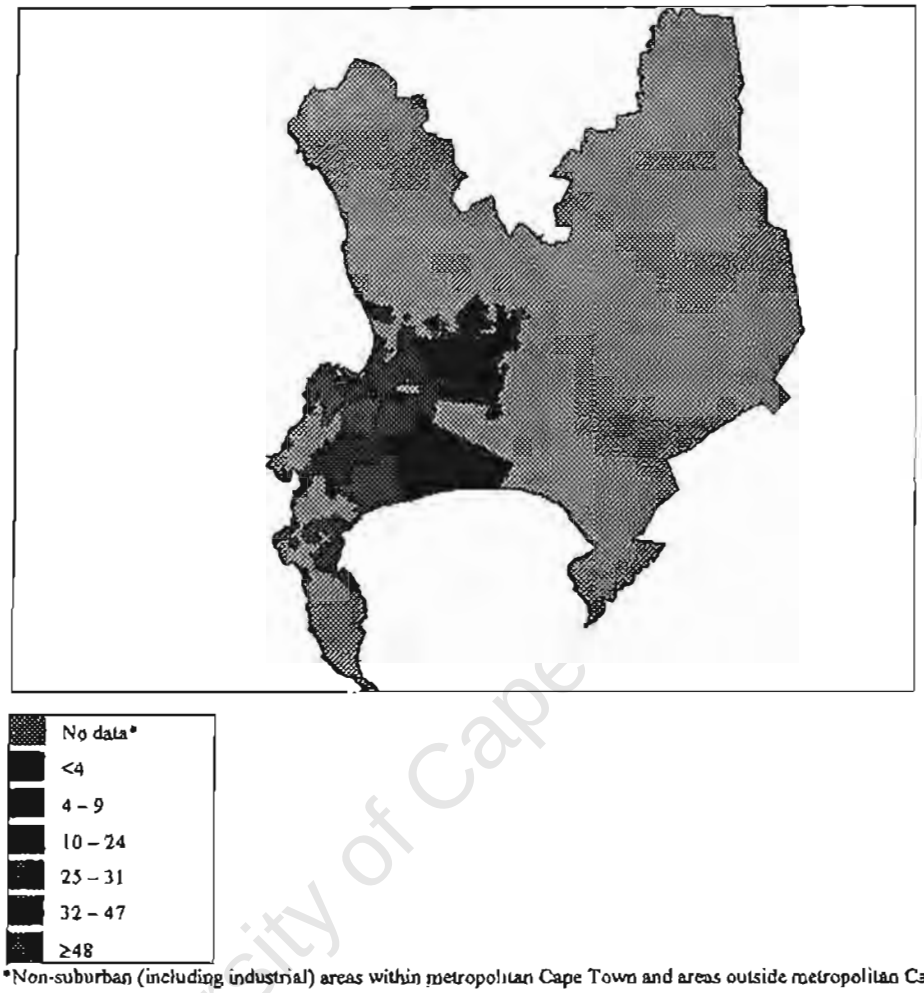
Table 5.147 demonstrates and Figure 5.24 illustrates that students whose home address is within the Greater Rondebosch area were responsible for the greatest (by far) number of attendees at the UCT-SHS-MHS from 1991 to 1993 followed (distantly) by City-Sea Point and Muizenberg-Ocean View resident students (all greater than 40 attendees).

Table 5.147 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) stratified by PCGs within metropolitan Cape Town.

PCG within metropolitan Cape Town		n	%
Code No. 15:	Maitland-Goodwood	34	8,6
Code No. 16:	Parow-Blackheath	11	2,8
Code No. 18:	Greater Rondebosch	142	35,9
Code No. 19:	Langa	3	0,8
Code No. 20:	Guguletu	6	1,5
Code No. 21:	Nyanga East	3	0,8
Code No. 22:	Greater Athlone	32	8,1
Code No. 23:	Khayelitsha	4	1,0
Code No. 24:	Mitchell's Plain	10	2,5
Code No. 25:	Greater Wynberg	26	6,6
Code No. 26:	Observatory-Woodstock	25	6,3
Code No. 27:	Muizenberg-Ocean View	48	12,2
Code No. 28:	City-Sea Point	51	12,9
Subtotal		395	100,0

Number of missing responses = Unknown.

Figure 5.24 Map depicting the frequency of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) stratified by PCGs within metropolitan Cape Town.



*Non-suburban (including industrial) areas within metropolitan Cape Town and areas outside metropolitan Cape Town.

(ii) PCGs outside metropolitan Cape Town but within the Western Cape Health Region (WCHR)

Table 5.148 demonstrates that students whose home address is within the George-Cape West Coast region were responsible for the greatest number of attendees at the UCT-SHS-MHS from 1991 to 1993 followed by Stellenbosch-Paarl-Franschhoek resident students (both greater than 5 attendees).

Table 5.148 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) stratified by PCGs outside metropolitan Cape Town but within the Western Cape Health Region (WCHR).

PCG outside metropolitan Cape Town but within WCHR		n	%
Code No. 7:	George-Cape West Coast	9	39,1
Code No. 8:	Robertson-Cape Mid Coast	0	0,0
Code No. 9:	Ceres-Worcester-Ladismith	2	8,7
Code No. 10:	Laingsburg-Beaufort West-De Aar	0	0,0
Code No. 11:	Eerste Rivier-Grabouw-Bredasdorp	5	21,7
Code No. 12:	Malmesbury-Citrusdal-Manre	0	0,0
Code No. 13:	Atlantis	0	0,0
Code No. 14:	Hopefield-Vredenburg-Saldanha	0	0,0
Code No. 17:	Stellenbosch-Paarl-Franschhoek	7	30,4
Subtotal		23	100,0

Number of missing responses = Unknown

(iii) PCGs outside metropolitan Cape Town and outside the Western Cape Health Region (WCHR) but within South Africa

Table 5.149 demonstrates that students whose home address is within the Transvaal (old provincial designation) were responsible for the greatest number of attendees at the UCT-SHS-MHS from 1991 to 1993 followed by Natal and East London-Ciskei-Tembu resident students (all greater than or equal to 50 attendees).

Table 5.149 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) stratified by PCGs outside metropolitan Cape Town and outside the Western Cape Health Region (WCHR) but within South Africa.

PCG outside metropolitan Cape Town and outside WCHR but within South Africa	n	%
Code No. 1: Transvaal	234	57,5
Code No. 2: Natal	61	15,0
Code No. 3: Orange Free State	19	4,7
Code No. 5: East London-Ciskei-Tembu	50	12,3
Code No. 6: Port Elizabeth-Cape Midwest	35	8,6
Code No. 29: Lamberts Bay-Springbok-Alexander Bay	1	0,2
Code No. 30: Kimberley-Upington	7	1,7
Subtotal	407	100,0

Number of missing responses = Unknown.

(iv) African and non-African countries outside South Africa

Table 5.150 demonstrates that students whose home address is within Zimbabwe were responsible for the greatest number of attendees at the UCT-SHS-MHS from 1991 to 1993 followed by Mauritius, Lesotho and Swaziland resident students (all greater than 5 attendees) while the subcategory Other refers to countries other than the seven African countries listed in the table and includes students from all the continents.

Table 5.150 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) stratified by African and non-African countries outside South Africa.

Country	n	%
Kenya	1	1,3
Lesotho	6	7,5
Mauritius	9	11,3
Namibia	5	6,3
Swaziland	6	7,5
Zambia	2	2,5
Zimbabwe	30	37,5
Non-African countries	21	26,3
Subtotal	80	100,0

Number of missing responses = Unknown.

(b) Abridged format

Table 5.151 demonstrates that students whose home address is outside metropolitan Cape Town and outside the WCHR but within South Africa were responsible for the greatest number of attendees at the UCT-SHS-MHS from 1991 to 1993 followed by metropolitan Cape Town resident students (both greater than 350 attendees).

Table 5.151 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) stratified by PCG groupings within South Africa together with African and non-African countries outside South Africa.

PCG/Country	n	%
Within metropolitan Cape Town	395	43,6
Outside metropolitan Cape Town but within WCHR	23	2,5
Outside metropolitan Cape Town and outside WCHR but within South Africa	407	45,0
African and non-African countries outside South Africa	80	8,8
Total	905	100,0

Number of missing responses = 27.

(c) Highly abridged format

(i) Patient-specific data

Table 5.152 demonstrates that there was a greater number of students whose home address is outside metropolitan Cape Town than students whose home address is within metropolitan Cape Town (by 29,1 per cent) who attended the UCT-SHS-MHS from 1991 to 1993.

Table 5.152 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) stratified by students who reside in PCGs within metropolitan Cape Town versus students who reside in PCGs and countries outside metropolitan Cape Town.

PCG/Country	n	%
Within metropolitan Cape Town	395	43,6
Outside metropolitan Cape Town	510	56,4
Total	905	100,0

Number of missing responses = 27.

(ii) Clinical/diagnostic-specific data

– Major diagnostic categories

Table 5.153 demonstrates that students who reside in PCGs and countries outside metropolitan Cape Town were diagnosed as presenting at the UCT-SHS-MHS with a greater number of all major diagnostic categories than students who reside in PCGs within metropolitan Cape Town (by 22,2 per cent for affective disorders, by 10,9 per cent for adjustment disorders, by 46,5 per cent for V-codes, by 41,1 per cent for anxiety

(neurotic) disorders, by 28,6 per cent for "other" disorders and by 28,3 per cent for total (combined) disorders, respectively) – however, none of these major diagnostic categories produced a statistically significant difference. For students who reside in PCGs and countries outside metropolitan Cape Town, adjustment disorder was the most common presenting major diagnostic category as well as the most frequently coded major diagnostic category for students who reside in PCGs within metropolitan Cape Town. However, neither of the major diagnostic categories produced a statistically significant result in favour of either students who reside in PCGs within metropolitan Cape Town or students who reside in PCGs and countries outside metropolitan Cape Town.

Table 5.153 Major diagnostic categories of students who reside in PCGs within metropolitan Cape Town (N=395) versus students who reside in PCGs and countries outside metropolitan Cape Town (N=510) presenting at the UCT-SHS-MHS (1991-1993).

Major diagnostic category	Within metropolitan Cape Town		Outside metropolitan Cape Town		Unadjusted OR (with 95% CI)	Df	χ^2	ρ
	n	%	n	%				
Affective disorder	45	11,2	55	10,6	1,1 (0,7- 1,6)	1	0,1	$0,799^{NS}$
Adjustment disorder	129	32,0	143	27,7	1,2 (0,9 - 1,7)	1	2,1	$0,151^{NS}$
V-codes	86	21,3	126	24,4	0,8 (0,6 - 1,2)	1	1,2	$0,279^{NS}$
Anxiety (neurotic) disorder	73	18,1	103	19,9	0,9 (0,6 - 1,3)	1	0,5	$0,489^{NS}$
"Other" disorders	70	17,4	90	17,4	1,0 (0,7 - 1,4)	1	0,0	$0,988^{NS}$
Total	403	100,0	517	100,0	-	4	2,8	$0,592^{BS}$

Number of missing responses = 27 for patients and 31 for diagnoses.

– Individual V-codes

Table 5.154 demonstrates that students who reside in PCGs and countries outside metropolitan Cape Town were diagnosed as presenting at the UCT-SHS-MHS with a greater number of all individual V-codes – except family problems, which were tied – than students who reside in PCGs within metropolitan Cape Town (by 51,4 per cent for relationship problems, by 88,9 per cent for complicated bereavements, by 80,0 per cent for pre- and post-termination counselling for unplanned/unwanted pregnancies, by 85,7 per cent for academic problems and by 46,5 per cent for total (combined) V-codes, respectively) – however, none of these individual V-codes produced a statistically significant difference. For students who reside in PCGs and countries outside metropolitan Cape Town, relationship problem was the most common presenting individual V-code as well as the most frequently coded individual V-code for students who reside in PCGs within metropolitan Cape Town. However, no individual V-code produced a statistically significant result in favour of either students who reside in PCGs within metropolitan Cape Town or students who reside in PCGs and countries outside metropolitan Cape Town.

Table 5.154 Individual V-codes of students who reside in PCGs within metropolitan Cape Town (N=395) versus students who reside in PCGs and countries outside metropolitan Cape Town (N=510) presenting at the UCT-SHS-MHS (1991-1993).

Individual V-code	Within metropolitan Cape Town		Outside metropolitan Cape Town		Unadjusted OR (with 95% CI)	Df	χ^2	p
	n	%	n	%				
Relationship problem	35	40,7	53	35	1,0 (0,5- 1,7)	1	0,0	0,843^{NS}
Family problem	25	29,1	25	25	1,7 (0,8 - 3,3)	1	2,4	0,120^{NS}
Complicated bereavement	9	10,5	17	9	0,8 (0,3 - 1,9)	1	0,4	0,509^{NS}
Unplanned/unwanted pregnancy	10	11,6	18	10	0,8 (0,3 - 1,9)	1	0,3	0,575^{NS}
Academic problem	7	8,1	13	7	0,8 (0,3 - 2,2)	1	0,3	0,594^{NS}
Total V-codes	86	100,0	126	86	-	4	2,8	0,595^{NS}

Number of missing responses = unknown.

5.1.4.2 Objective 2 (patients versus controls) and Objective 3 (patients versus the total student community)

Research Hypothesis VIIIa of the UCT-SHS study is as follows:

> *Students whose home address (as opposed to term address for out-of-town students) is outside metropolitan Cape Town are more likely to present with mental disorders at the UCT-SHS-MHS than their peers whose home address is within metropolitan Cape Town.*

In these objectives Research Hypothesis VIIIa is either confirmed or rejected according to the unadjusted odds ratio or χ^2 test (p-value) for UCT-SHS-MHS attendees (patients) versus UCT-SHS medical attendees (controls) [Objective 2] or to additional usage/utilisation rates per 1 000 students and utilisation ratios for patients versus registered UCT students (the total student community) [Objective 3].

(a) Non-abridged format

(i) PCGs within metropolitan Cape Town

Table 5.155 demonstrates and Figure 5.25 illustrates that students whose home address is within the Muizenberg-Ocean View area are statistically (p=0,020) more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS which corresponds to a likelihood ratio ($\%_1$:$\%_2$) of 1,605. In fact, these students are 27,3 per cent overrepresented (with a standardised residual of +1,7) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0. Conversely, students whose home address is within Guguletu and Langa are statistically (p=0,020 and 0,023, respectively) less likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS which correspond to likelihood ratios ($\%_1$:$\%_2$) of 0,357 and 0,276, respectively. In fact, these students are

50,0 and 61,0 per cent, respectively, underrepresented (with standardised residuals of -1,7 each) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0. In addition, the metropolitan Cape Town home address-specific variable subcategory with its thirteen (for purposes of analysis) subcategories did produce a statistically significant (p=0,000) result.

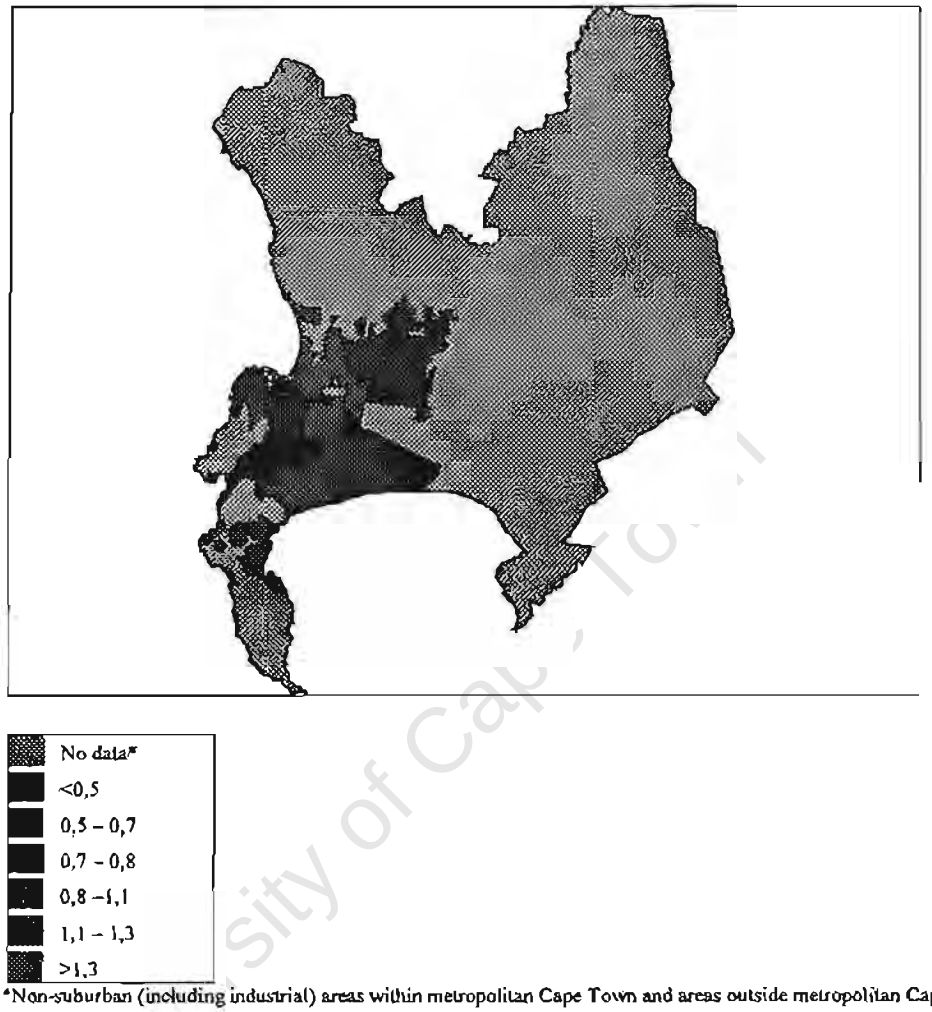
However, Table 5.156 demonstrates and Figure 5.26 illustrates that students whose home address is within the Nyanga East and the Greater Rondebosch area are statistically (p=0,029 and 0,008, respectively) more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than their representation of the student community would suggest which correspond to likelihood ratios ($\%_1$:$\%_3$) of 4,000 and 1,201, respectively. In fact, these students are 233,3 and 20,0 per cent, respectively, overrepresented (with standardised residuals of +2,3 and +2,2, respectively) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0. Conversely, students whose home address is within Parow-Blackheath and the Greater Wynberg area are statistically (p=0,002 each) less likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than their representation of the student community would suggest which correspond to likelihood ratios ($\%_1$:$\%_3$) of 0,431 and 0,574, respectively. In fact, these students are 57,4 and 42,7 per cent, respectively, underrepresented (with standardised residuals of -2,9 each) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0. In addition, the metropolitan Cape Town home address-specific variable subcategory with its thirteen (for purposes of analysis) subcategories did produce a statistically significant (p=0,000) result.

Table 5.155 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of controls (N=1 924) stratified by PCGs within metropolitan Cape Town.

PCG within metropolitan Cape Town	n_1	$\%_1$	n_2	$\%_2$	Unadjusted OR (with 95% CI)	Df	χ^2	p
Code No. 15: Maitland-Goodwood	34	8,6	36	6,8	1,3 (0,8 - 2,1)	1	1,0	$0,318^{NS}$
Code No. 16: Parow-Blackheath	11	2,8	18	3,4	0,8 (0,4 - 1,7)	1	0,3	$0,584^{NS}$
Code No. 18: Greater Rondebosch	142	35,9	186	35,4	1,0 (0,8 - 1,3)	1	0,0	$0,854^{NS}$
Code No. 19: Langa	3	0,8	15	2,9	0,3 (0,1 - 0,9)	1	5,2	$0,023^{Sig}$
Code No. 20: Guguletu	6	1,5	22	4,2	0,4 (0,1 - 0,9)	1	5,4	$0,020^{Sig}$
Code No. 21: Nyanga East	3	0,8	8	1,5	0,5 (0,1 - 1,9)	1	1,1	$0,292^{NS}$
Code No. 22: Greater Athlone	32	8,1	34	6,5	1,3 (0,8 - 2,1)	1	0,9	$0,340^{NS}$
Code No. 23: Khayelitsha	4	1,0	8	1,5	0,7 (0,2 - 2,2)	1	0,5	$0,501^{NS}$
Code No. 24: Mitchell's Plain	10	2,5	12	2,3	1,1 (0,5 - 2,6)	1	0,1	$0,806^{NS}$
Code No. 25: Greater Wynberg	26	6,6	49	9,3	0,7 (0,4 - 1,1)	1	2,3	$0,133^{NS}$
Code No. 26: Observatory-Woodstock	25	6,3	42	8,0	0,8 (0,5 - 1,3)	1	0,9	$0,338^{NS}$
Code No. 27: Muizenberg-Ocean View	48	12,2	40	7,6	1,7 (1,1 - 2,6)	1	5,4	$0,020^{Sig}$
Code No. 28: City-Sea Point	51	12,9	56	10,6	1,2 (0,8 - 1,9)	1	1,1	$0,288^{NS}$
Subtotal	395	100,0	526	100,0	-	12	22,8	$0,030^{Sig}$

Number of missing responses = 27 for patients and 5 for controls.
n_1 and $\%_1$ refer to patients.
n_2 and $\%_2$ refer to controls.

Figure 5.25 Map depicting the unadjusted ORs for patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) versus controls (N=1 924) stratified by PCGs within metropolitan Cape Town.



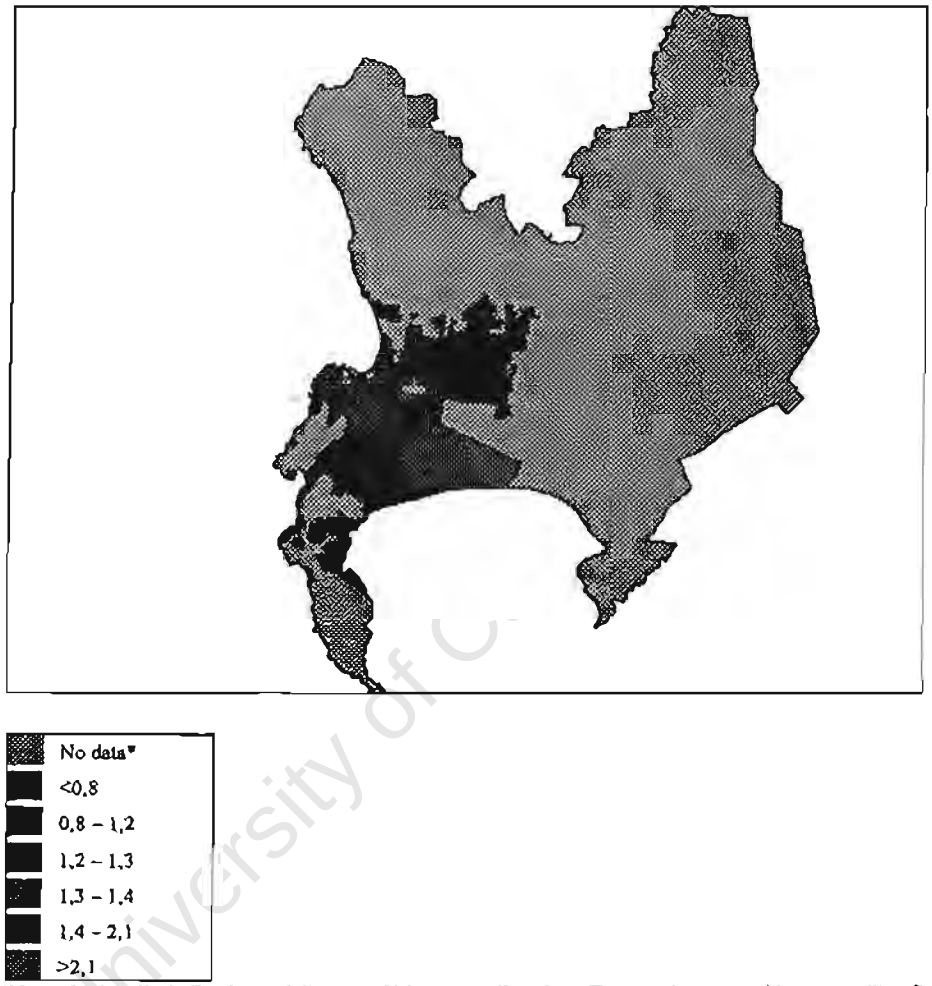
*Non-suburban (including industrial) areas within metropolitan Cape Town and areas outside metropolitan Cape Town.

Table 5.156 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of the total student community (N=23 158) stratified by PCGs within metropolitan Cape Town.

PCG within metropolitan Cape Town		n_1	$\%_1$	n_2	$\%_2$	Unadjusted OR (with 95% CI)	Df	χ^2	p
Code No. 15:	Maitland-Goodwood	34	8,6	1 443	11,0	0,8 (0,5 - 1,1)	1	2,3	$0,130^{NS}$
Code No. 16:	Parow-Blackheath	11	2,8	862	6,5	0,4 (0,2 - 0,7)	1	9,4	$0,002^{Sig}$
Code No. 18:	Greater Rondebosch	142	35,9	3 944	29,9	1,3 (1,1 - 1,6)	1	7,0	$0,008^{Sig}$
Code No. 19:	Langa	3	0,8	73	0,6	1,4 (0,4 - 4,4)	1	0,3	$0,576^{NS}$
Code No. 20:	Guguletu	6	1,5	141	1,1	1,4 (0,6 - 3,3)	1	0,8	$0,378^{NS}$
Code No. 21:	Nyanga East	3	0,8	31	0,2	3,5 (1,1 - 11,5)	1	4,8	$0,029^{Sig}$
Code No. 22:	Greater Athlone	32	8,1	879	6,7	1,2 (0,9 - 1,8)	1	1,3	$0,247^{NS}$
Code No. 23:	Khayelitsha	4	1,0	65	0,5	2,1 (0,8 - 5,9)	1	2,2	$0,135^{NS}$
Code No. 24:	Mitchell's Plain	10	2,5	210	1,6	1,6 (0,9 - 3,1)	1	2,3	$0,131^{NS}$
Code No. 25:	Greater Wynberg	26	6,6	1 513	11,5	0,5 (0,4 - 0,8)	1	9,6	$0,002^{Sig}$
Code No. 26:	Observatory-Woodstock	25	6,3	677	5,1	1,3 (0,8 - 1,9)	1	1,2	$0,276^{NS}$
Code No. 27:	Muizenberg-Ocean View	48	12,2	1 454	11,0	1,1 (0,8 - 1,5)	1	0,5	$0,471^{NS}$
Code No. 28:	City-Sea Point	51	12,9	1 886	14,3	0,9 (0,7 - 1,2)	1	0,7	$0,420^{NS}$
Subtotal		395	100,0	13 178	100,0	-	12	38,0	$0,000^{Sig}$

Number of missing responses = Unknown for patients and students.
n_1 and $\%_1$ refer to patients.
n_2 and $\%_2$ refer to the total student community.

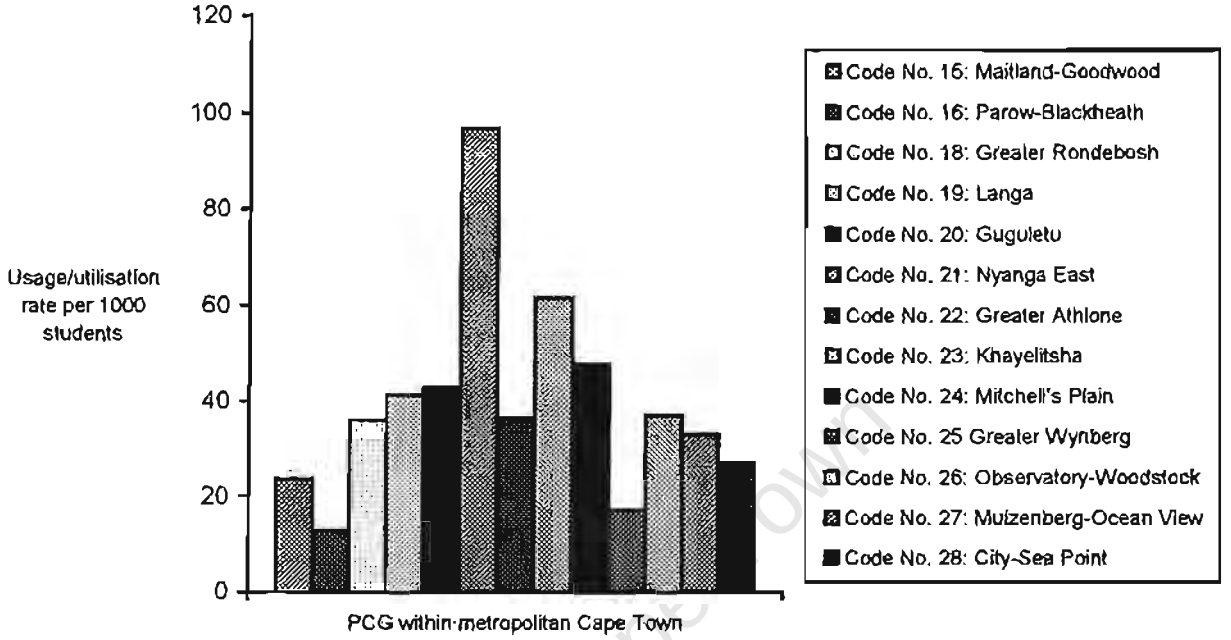
Figure 5.26 Map depicting the unadjusted ORs for patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) versus the total student community (N=23 158) stratified by PCGs within metropolitan Cape Town.



*Non-suburban (including industrial) areas within metropolitan Cape Town and areas outside metropolitan Cape Town.

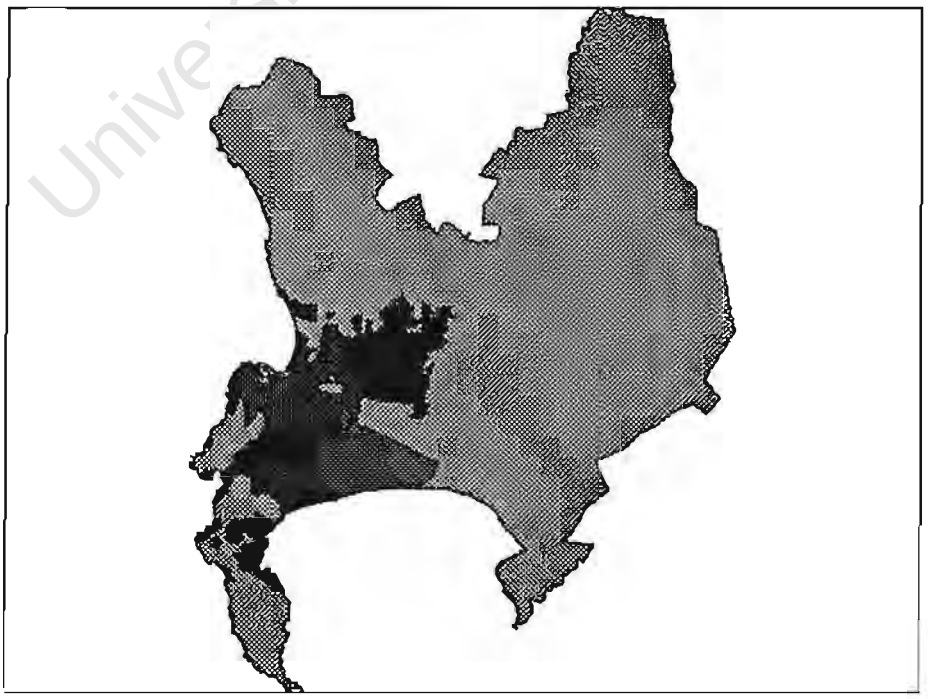
Figures 5.27 and 5.28 illustrate and Table 5.157 demonstrates that students whose home address is within Nyanga East have the highest usage/utilisation rate and, consequently, utilisation ratio followed by students whose home address is within Khayelitsha, Mitchell's Plain, Guguletu and Langa (all greater than 40,0 attendees per 1 000 students).

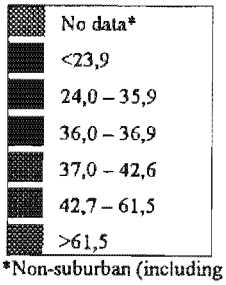
Figure 5.27 Usage/utilisation rate per 1 000 students in students presenting at the UCT-SHS-MHS (1991-1993) stratified by PCGs within metropolitan Cape Town.



Refer to Table 5.157 for values of usage/utilisation rates.

Figure 5.28 Map depicting the usage/utilisation rate per 1 000 students in students presenting at the UCT-SHS-MHS (1991-1993) stratified by PCGs within metropolitan Cape Town.





*Non-suburban (including industrial) areas within metropolitan Cape Town and areas outside metropolitan Cape Town.

Table 5.157 Usage/utilisation rate per 1 000 students and utilisation ratio in students presenting at the UCT-SHS-MHS (1991-1993) stratified by PCGs within metropolitan Cape Town.

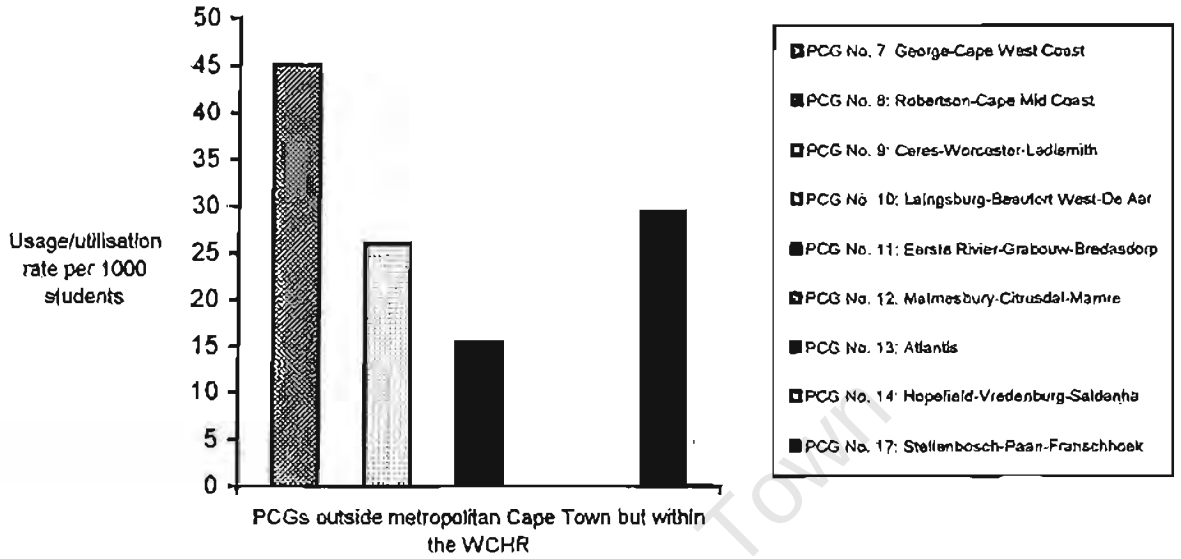
PCG within metropolitan Cape Town	Usage/utilisation rate per 1 000 students	Deviation from mean usage/utilisation rate per 1 000 students	Utilisation ratio
Code No. 15: Maitland-Goodwood	23,6	-15,5	0,60
Code No. 16: Parow-Blackheath	12,8	-26,3	0,33
Code No. 18: Greater Rondebosch	36,0	-3,1	0,92
Code No. 19: Langa	41,1	+2,0	1,05
Code No. 20: Guguletu	42,6	+3,5	1,09
Code No. 21: Nyanga East	96,8	+57,7	2,48
Code No. 22: Greater Athlone	36,4	-2,7	0,93
Code No. 23: Khayelitsha	61,5	+22,4	1,57
Code No. 24: Mitchell's Plain	47,6	+8,5	1,22
Code No. 25: Greater Wynberg	17,2	-21,9	0,44
Code No. 26: Observatory-Woodstock	36,9	-2,2	0,94
Code No. 27: Muizenberg-Ocean View	33,0	-6,1	0,84
Code No. 28: City-Sea Point	27,0	-12,1	0,69
Mean	39,1	-	1,00

(ii) PCGs outside metropolitan Cape Town but within the Western Cape Health Region (WCHR)

Unadjusted ORs for patients versus controls or patients versus the total student community where the individual subcategory is compared to the remaining subcategories by means of contingency (2x2) tables have not been employed for this particular format of the residence (home address)-specific variable.

Figure 5.29 illustrates and Table 5.158 demonstrates that students whose home address is within the George-Cape West Coast region have the highest usage/utilisation rate and, consequently, utilisation ratio followed by Stellenbosch-Paarl-Franschhoek resident students (both greater than 30,0 attendees per 1 000 students).

Figure 5.29 Usage/utilisation rate per 1 000 students in students presenting at the UCT-SHS-MHS (1991-1993) stratified by PCGs outside metropolitan Cape Town but within the Western Cape Health Region (WCHR).



Refer to Table 5.158 for values of usage/utilisation rates.

Table 5.158 Usage/utilisation rate per 1 000 students and utilisation ratio in students presenting at the UCT-SHS-MHS (1991-1993) stratified by PCGs outside metropolitan Cape Town but within the Western Cape Health Region (WCHR).

PCGs outside metropolitan Cape Town but within the WCHR	Usage/utilisation rate per 1 000 students	Deviation from mean usage/utilisation rate per 1 000 students	Utilisation ratio
PCG No. 7: George-Cape West Coast	45,2	+6,1	1,16
PCG No. 8: Robertson-Cape Mid Coast	0,0	-39,1	N/A
PCG No. 9: Ceres-Worcester-Ladismith	26,0	-13,1	0,66
PCG No. 10: Laingsburg-Beaufort West-De Aar	0,0	-39,1	N/A
PCG No. 11: Eerste Rivier-Grabouw-Bredasdorp	15,4	-15,4	0,39
PCG No. 12: Malmesbury-Citrusdal-Mamre	0,0	-39,1	N/A
PCG No. 13: Atlantis	0,0	-39,1	N/A
PCG No. 14: Hopefield-Vredenburg-Saldanha	0,0	-39,1	N/A
PCG No. 17: Stellenbosch-Paarl-Franschhoek	29,4	-9,7	0,75
Mean	39,1	-	1,00

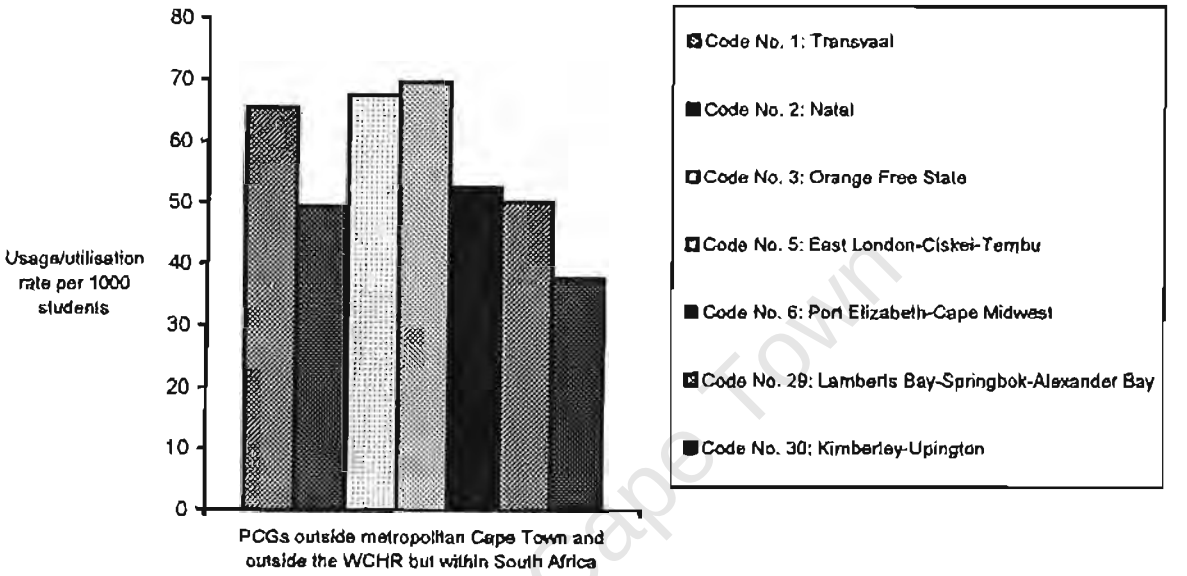
(iii) PCGs outside metropolitan Cape Town and outside the Western Cape Health Region (WCHR) but within South Africa

Unadjusted ORs for patients versus controls and patients versus the total student community where the individual subcategory is compared to the remaining subcategories by means of contingency (2x2) tables have not been employed for this particular format of the residence (home address)-specific variable.

Figure 5.30 illustrates and Table 5.159 demonstrates that students whose home address is within the East London-Ciskei-Tembu region have the highest usage/utilisation rate and, consequently, utilisation ratio

followed by Orange Free State, Transvaal and Port Elizabeth-Cape Midwest resident students (all greater than 50,0 attendees per 1 000 students).

Figure 5.30 Usage/utilisation rate per 1 000 students in students presenting at the UCT-SHS-MHS (1991-1993) stratified by PCGs outside metropolitan Cape Town and outside the Western Cape Health Region (WCHR) but within South Africa.



Refer to Table 5.159 for values of usage/utilisation rates.

Table 5.159 Usage/utilisation rate per 1 000 students and utilisation ratio in students presenting at the UCT-SHS-MHS (1991-1993) stratified by PCGs outside metropolitan Cape Town and outside the Western Cape Health Region (WCHR) but within South Africa.

PCGs outside metropolitan Cape Town and outside the WCHR but within South Africa	Usage/utilisation rate per 1 000 students	Deviation from mean usage/utilisation rate per 1 000 students	Utilisation ratio
Code No. 1: Transvaal	65,4	+26,3	1,67
Code No. 2: Natal	49,2	+10,1	1,26
Code No. 3: Orange Free State	67,4	+28,3	1,72
Code No. 5: East London-Ciskei-Tembu	69,4	+30,3	1,77
Code No. 6: Port Elizabeth-Cape Midwest	52,4	+13,3	1,34
Code No. 29: Lamberts Bay-Springbok-Alexander Bay	50,0	+10,9	1,28
Code No. 30: Kimberley-Upington	37,6	-1,5	0,96
Mean	39,1	-	1,00

(iv) African and non-African countries outside South Africa

Unadjusted ORs for patients versus controls and patients versus the total student community where the individual subcategory is compared to the remaining subcategories by means of contingency (2x2) tables have not been employed for this particular format of the residence (home address)-specific variable.

African and non-African countries outside South Africa	80	8,8	261	13,6	0,6 (0,5 - 0,8)	1	13,7	0,000[Sig]
Total	905	100,0	1 919	100,0	-	3	76,0	0,000[Sig]

(b) ORs adjusted for gender, race/population group and age

Variable	SE	Adjusted OR (with 95% CI)	Df	χ^2	Prob >χ^2
Intercept	0,327	[4,962]	1	25,4	0,000[Sig]
Within metropolitan Cape Town	0,147	2,2 (1,6 - 2,9)	1	29,6	0,000[Sig]
Outside metropolitan Cape Town but within WCHR	0,274	1,0 (0,6 - 1,7)	1	0,0	0,876[NS]
Outside metropolitan Cape Town and outside WCHR but within South Africa	0,145	1,3 (1,0 - 1,7)	1	2,6	0,106[NS]
Residence	-	-	3	50,0	<0,01[Sig]
Model fit	-	-	8	136,9	0,000[Sig]

Number of missing responses = 27 for patients and 5 for controls.
n_1 and $\%_1$ refer to patients.
n_2 and $\%_2$ refer to controls.

Table 5.162 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of the total student community (N=23 158) stratified by PCG groupings within South Africa together with African and non-African countries outside South Africa.

(a) Unadjusted ORs and χ^2 tests

PCG/Country	n_1	$\%_1$	n_3	$\%_3$	Unadjusted OR (with 95% CI)	Df	χ^2	p
Within metropolitan Cape Town	395	43,6	13 178	56,9	0,6 (0,5-0,7)	1	67,5	0,000[Sig]
Outside metropolitan Cape Town but within WCHR	23	2,5	952	4,1	0,6 (0,4-0,9)	1	5,9	0,015[Sig]
Outside metropolitan Cape Town and outside WCHR but within South Africa	407	45,0	6 693	28,9	2,0 (1,8-2,3)	1	108,5	0,000[Sig]
African and non-African countries outside South Africa	80	8,8	2 336	10,1	1,0 (0,8-1,2)	1	0,1	0,723[NS]
Total	905	100,0	23 158	100,0	-	3	114,5	0,000[Sig]

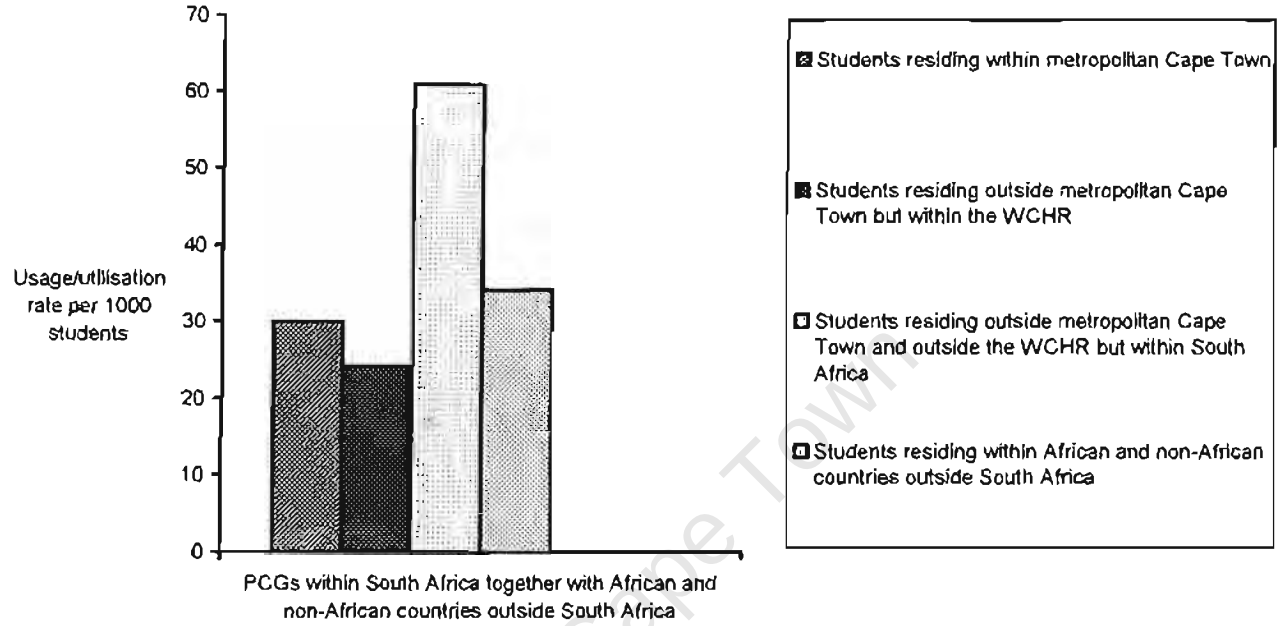
(b) ORs adjusted for gender, race/population group and age

Variable	SE	Adjusted OR (with 95% CI)	Df	χ^2	Prob >χ^2
Intercept	0,253	[17,421]	1	136,9	0,000[Sig]
Within metropolitan Cape Town	0,126	0,9 (0,7 - 1,2)	1	0,4	0,554[NS]
Outside metropolitan Cape Town but within WCHR	0,241	0,8 (0,5 - 1,3)	1	1,4	0,233[NS]
Outside metropolitan Cape Town and outside WCHR but within South Africa	0,129	1,4 (1,1 - 1,8)	1	7,5	0,006[Sig]
Residence	-	-	3	27,2	<0,01[Sig]
Model fit		-	8	351,6	0,000[Sig]

Number of missing responses = 27 for patients.
n_1 and $\%_1$ refer to patients.
n_3 and $\%_3$ refer to the total student community.

Figure 5.32 illustrates and Table 5.163 demonstrates that students whose home address is outside metropolitan Cape Town and outside the WCHR but within South Africa have the highest usage/utilisation rate and, consequently, utilisation ratio followed by African and non-African countries outside South Africa resident students (both greater than 30,0 attendees per 1 000 students).

Figure 5.32 Usage/utilisation rate per 1 000 students in students presenting at the UCT-SHS-MHS (1991-1993) stratified by PCG groupings within South Africa together with African and non-African countries outside South Africa.



Refer to Table 5.163 for values of usage/utilisation rates.

Table 5.163 Usage/utilisation rate per 1 000 students and utilisation ratio in students presenting at the UCT-SHS-MHS (1991-1993) stratified by PCG groupings within South Africa together with African and non-African countries outside South Africa.

PCGs within South Africa together with African and non-African countries outside South Africa	Usage/utilisation rate per 1 000 students	Deviation from mean usage/utilisation rate per 1 000 students	Utilisation ratio
Students residing within metropolitan Cape Town	30,0	-9,1	0,77
Students residing outside metropolitan Cape Town but within the WCHR	24,2	-14,9	0,62
Students residing outside metropolitan Cape Town and outside the WCHR but within South Africa	60,8	+21,7	1,55
Students residing within African and non-African countries outside South Africa	34,2	-4,9	0,87
Mean	39,1	-	1,00

(c) Abridged format ("Matrix" format)

(i) Overview

The layout adopted has been to compare the individual subcategory to the remaining subcategories (by means of contingency (2x2) tables for data fulfilling Objectives 2 and 3) – the initial subheading in Tables 5.164 and 5.165 will detail students whose home address is within metropolitan Cape Town versus students whose home address is outside metropolitan Cape Town but within the WCHR, students whose home address is outside metropolitan Cape Town and outside the WCHR but within South Africa, and students whose home

address is African and non-African countries outside South Africa, respectively, while the second subheading in Tables 5.164 and 5.165 will detail students whose home address is outside metropolitan Cape Town but within the WCHR versus students whose home address is outside metropolitan Cape Town and outside the WCHR but within South Africa, and students whose home address is African and non-African countries outside South Africa, respectively, while the final subheading in Tables 5.164 and 5.165 will detail students whose home address is outside metropolitan Cape Town and outside the WCHR but within South Africa versus students whose home address is African and non-African countries outside South Africa. This standardised format will prevent the repetition of reverse comparisons.

(ii) Results

Table 5.164 demonstrates that students whose home address is within metropolitan Cape Town appear more likely than students who reside in African and non-African countries outside South Africa to present at the UCT-SHS-MHS than attend the UCT-SHS with purely medical complaints as reflected by statistically significant (p=0,035) positive OR for patients versus controls. In fact, students whose home address is within metropolitan Cape Town are 13,9 per cent underrepresented (with a standardised residual of –1,2) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0. (These OR values, in turn, for students whose home address is within metropolitan Cape Town versus students who reside in African and non-African countries outside South Africa are somewhat less than those recorded for students whose home address is within metropolitan Cape Town versus students whose home address is outside metropolitan Cape Town and outside the WCHR but within South Africa (by 0,7) thereby suggesting the existence of a negative gradient between national and international (foreign) students (relative to students whose home address is within metropolitan Cape Town) in making use of university mental health services. This trend, however, does not apply to students whose home address is outside metropolitan Cape Town but within the WCHR which record an OR less than that for students whose home address is outside metropolitan Cape Town and outside the WCHR but within South Africa (by 1,2)). However, the results in Table 5.165 suggest that students whose home address is within metropolitan Cape Town are less likely than students who reside in African and non-African countries outside South Africa to present at the UCT-SHS-MHS as reflected by statistically significant (p=0,000) negative OR for patients versus total student community. In fact, students whose home address is within metropolitan Cape Town are 11,9 per cent overrepresented (with a standardised residual of +1,4) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0. (These OR values for students whose home address is within metropolitan Cape Town versus students who reside in African and non-African countries outside South Africa are slightly lower than those recorded for students whose home address is within metropolitan Cape Town versus students whose home address is outside metropolitan Cape Town and outside the WCHR but within South Africa (by 0,1) thereby, again, suggesting the existence of a negative gradient between national and international (foreign) students (relative to students whose home address is within metropolitan Cape Town) relative to UCT-SHS-MHS attendance. This trend, however, again does not apply to students whose home address is outside metropolitan Cape Town but within the WCHR which record an OR less than that

for students whose home address is outside metropolitan Cape Town and outside the WCHR but within South Africa (by 0,1)).

Table 5.164 demonstrates that students whose home address is outside metropolitan Cape Town but within the WCHR are slightly more likely than students who reside in African and non-African countries outside South Africa to present at the UCT-SHS-MHS than attend the UCT-SHS with purely medical complaints as reflected by a statistically insignificant OR for patients versus controls. In fact, students whose home address is outside metropolitan Cape Town but within the WCHR are 0,3 per cent overrepresented (with a standardised residual of +0,0) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0. (These OR values, in turn, for students whose home address is outside metropolitan Cape Town but within the WCHR versus students who reside in African and non-African countries outside South Africa are somewhat lower than those recorded for students whose home address is outside metropolitan Cape Town but within the WCHR versus students whose home address is outside metropolitan Cape Town and outside the WCHR but within South Africa (by 1,1) thereby suggesting the existence of a strong negative gradient between national and international (foreign) students (relative to students whose home address is outside metropolitan Cape Town but within the WCHR) in making use of university mental health services. However, the results in Table 5.165 suggest that students whose home address is outside metropolitan Cape Town but within the WCHR are neither more nor less likely than students who reside in African and non-African countries outside South Africa to present at the UCT-SHS-MHS as reflected by an insignificant OR for patients versus total student community. In fact, students whose home address is outside metropolitan Cape Town but within the WCHR are 9,3 per cent overrepresented (with a standardised residual of +1,1) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0. (These OR values for students whose home address is outside metropolitan Cape Town but within the WCHR versus students who reside in African and non-African countries outside South Africa are, in this case, somewhat lower than those recorded for students whose home address is outside metropolitan Cape Town but within the WCHR versus students whose home address is outside metropolitan Cape Town and outside the WCHR but within South Africa (by 0,3) thereby suggesting the existence of a negative gradient between national and international (foreign) students (relative to students whose home address is outside metropolitan Cape Town but within the WCHR) relative to UCT-SHS-MHS attendance).

Table 5.164 demonstrates that students whose home address is outside metropolitan Cape Town and outside the WCHR but within South Africa are less likely than students who reside in African and non-African countries outside South Africa to present at the UCT-SHS-MHS than attend the UCT-SHS with purely medical complaints as reflected by a statistically (p=0,000) negative OR for patients versus controls. In fact, students whose home address is outside metropolitan Cape Town and outside the WCHR but within South Africa are 13,1 per cent underrepresented (with a standardised residual of −1,4) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0. In addition, the results in Table 5.165 suggest that students whose home address is outside metropolitan Cape Town and outside the WCHR but within South Africa are only minimally less likely than students who

reside in African and non-African countries outside South Africa to present at the UCT-SHS-MHS with psychological or psychiatric complaints as reflected by a statistically insignificant OR for patients versus total student community. In fact, students whose home address is outside metropolitan Cape Town and outside the WCHR but within South Africa are 36,5 per cent underrepresented (with a standardised residual of –4,1) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0.

Table 5.164 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of controls (N=1 924) stratified by PCG groupings within South Africa together with African and non-African countries outside South Africa according to "matrix" format.

PCG/Country	n_1	$\%_1$	n_2	$\%_2$	Unadjusted OR (with 95% CI)	Df	χ^2	p
Within metropolitan Cape Town								
WCHR[1]	23	5,5	76	12,6	0,8 (0,5 - 1,3)	1	1,0	$0,306^{NS}$
South Africa[2]	407	50,7	1 056	66,8	2,0 (1,7 - 2,5)	1	104,8	$0,000^{Sig}$
Outside South Africa[3]	80	16,8	261	33,2	1,3 (1,0 - 1,7)	1	4,4	$0,035^{Sig}$
Outside metropolitan Cape Town but within WCHR								
South Africa[2]	407	94,7	1 056	93,3	2,5 (1,7 - 3,3)	1	20,8	$0,000^{Sig}$
Outside South Africa[3]	80	77,7	261	77,4	1,4 (0,9 - 2,5)	1	3,9	$0,470^{NS}$
Outside metropolitan Cape Town and outside WCHR but within South Africa								
Outside South Africa[3]	80	16,4	261	19,8	0,6 (0,5 - 0,8)	1	18,8	$0,000^{Sig}$

Number of missing responses =27 for patients and 5 for controls.
[1]Outside metropolitan Cape Town but within WCHR.
[2]Outside metropolitan Cape Town and outside WCHR but within South Africa.
[3]African and non-African countries outside South Africa.
n_1 and $\%_1$ refer to patients.
n_2 and $\%_2$ refer to controls.

Table 5.165 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of total student community (N=23 158) stratified by PCG groupings within South Africa together with African and non-African countries outside South Africa according to "matrix" format.

PCG/Country	n_1	$\%_1$	n_3	$\%_3$	Unadjusted OR (with 95% CI)	Df	χ^2	p
Within metropolitan Cape Town								
WCHR[1]	23	5,5	952	6,7	0,4 (0,3 - 0,7)	1	14,3	$0,000^{Sig}$
South Africa[2]	407	50,7	6 693	33,7	0,5 (0,4 - 0,6)	1	56,2	$0,000^{Sig}$
Outside South Africa[3]	80	16,8	2 336	15,1	0,4 (0,3 - 0,6)	1	42,7	$0,000^{Sig}$
Outside metropolitan Cape Town but within WCHR								
South Africa[2]	407	94,7	6 693	87,5	1,3 (0,8 - 2,0)	1	1,0	$0,322^{NS}$
Outside South Africa[3]	80	77,7	2 336	71,0	1,0 (0,6 - 1,7)	1	0,4	$0,840^{NS}$
Outside metropolitan Cape Town and outside WCHR but within South Africa								
Outside South Africa[3]	80	16,4	2 336	25,9	0,8 (0,6 - 1,1)	1	2,2	$0,139^{NS}$

Number of missing responses =27 for patients.
[1]Outside metropolitan Cape Town but within WCHR.
[2]Outside metropolitan Cape Town and outside WCHR but within South Africa.
[3]African and non-African countries outside South Africa.
n_1 and $\%_1$ refer to patients.
n_3 and $\%_3$ refer to the total student community.

(d) Highly abridged format

(i) Patient-specific data

Table 5.166 demonstrates that students whose home address is outside metropolitan Cape Town are less likely than students whose home address is within metropolitan Cape Town to present at the UCT-SHS-MHS than attend the UCT-SHS with purely medical complaints as reflected by a statistically significant (p=0,000) negative OR for patients versus controls which corresponds to a likelihood ratio ($\%_1:\%_2$) of 0,777. In fact students whose home address is within metropolitan Cape Town are 33,8 per cent overrepresented (with a standardised residual of +5,8) and students whose home address is outside metropolitan Cape Town are 16,4 per cent underrepresented (with a standardised residual of -4,0) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0.

However, the results in Table 5.167 suggest that students whose home address is outside metropolitan Cape Town are more likely than students whose home address is within metropolitan Cape Town to present at the UCT-SHS-MHS as reflected by a statistically significant (p=0,000) positive OR for patients versus total student community which corresponds to a likelihood ratio ($\%_1:\%_2$) of 1,309. Here students whose home address is outside metropolitan Cape Town are 29,3 per cent overrepresented (with a standardised residual of +5,8) and students whose home address is within metropolitan Cape Town are 22,6 per cent underrepresented (with a standardised residual of -5,1) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0. These findings therefore reject Research Hypothesis VIIIa for Objective 2 and confirm Research Hypothesis VIIIa for Objective 3 of the UCT-SHS study.

Table 5.166 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of controls (N=1 924) stratified by PCGs within metropolitan Cape Town versus PCGs and countries outside metropolitan Cape Town.

(a) Unadjusted ORs and χ^2 tests

PCG/country	n_1	$\%_1$	n_2	$\%_2$	Unadjusted OR (with 95% CI)	Df	χ^2	p
Within metropolitan Cape Town	395	43,6	526	27,4	2,1 (1,7 - 2,4)	1	73,8	0,000[S*a]
Outside metropolitan Cape Town	510	56,4	1 393	72,6	-	-	-	-
Total	905	100,0	1 919	100,0	-	-	-	-

(b) Expected frequencies

PCG/country	Observed frequency$_1$	Expected frequency$_1$	Difference between observed and expected frequency$_1$	Observed frequency$_2$	Expected frequency$_2$	Difference between observed and expected frequency$_2$
Within metropolitan Cape Town	395	295,2	+99,8 (+33,8%)	526	625,8	-99,8 (-15,9%)
Outside metropolitan Cape Town	510	609,8	-99,8 (-16,4%)	1 393	1 293,2	+99,8 (+7,7%)
Total	905	905,0	-	1 919	1 919,0	-

Number of missing responses = 27 for patients and 5 for controls.
n_1 and $\%_1$ refer to patients.
Observed frequency$_1$ and expected frequency$_1$ refer to patients.
n_2 and $\%_2$ refer to controls.
Observed frequency$_2$ and expected frequency$_2$ refer to controls.

Table 5.167 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of total student community (N=23 158) stratified by PCGs within metropolitan Cape Town versus PCGs and countries outside metropolitan Cape Town.

(a) Unadjusted ORs and χ^2 tests

PCG/country	n_1	$\%_1$	n_3	$\%_3$	Unadjusted OR (with 95% CI)	Df	χ^2	ρ
Within metropolitan Cape Town	395	43,6	13 178	56,9	-	-	-	-
Outside metropolitan Cape Town	510	56,4	9 980	43,1	1,7 (1,4-2,0)	1	67,5	0,000^{Sig}
Total	905	100,0	23 158	100,0	-	-	-	-

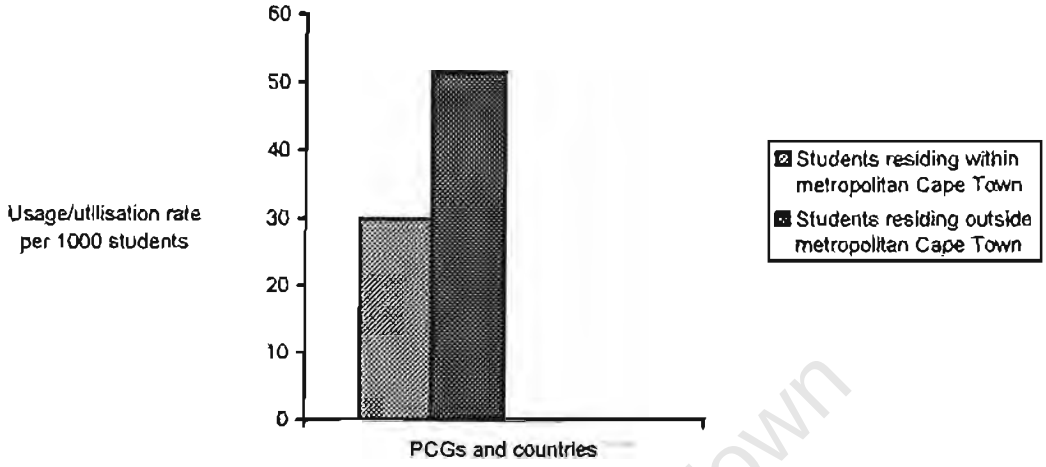
(b) Expected frequencies

PCG/country	Observed frequency$_1$	Expected frequency$_1$	Difference between observed and expected frequency$_1$	Observed frequency$_3$	Expected frequency$_3$	Difference between observed and expected frequency$_3$
Within metropolitan Cape Town	395	510,5	-115,5 (-22,6%)	13 178	13 062,5	+115,5 (+0,9%)
Outside metropolitan Cape Town	510	394,5	+115,5 (+29,3%)	9 980	10 095,5	-115,5 (-1,1%)
Total	905	905,0	-	23 158	23 158,0	-

Number of missing responses = 27 for patients.
n_1 and $\%_1$ refer to patients.
Observed frequency$_1$ and expected frequency$_1$ refer to patients.
n_3 and $\%_3$ refer to the total student community.
Observed frequency$_3$ and expected frequency$_3$ refer to the total student community.

Figure 5.33 illustrates and Table 5.168 demonstrates that students whose home address is outside metropolitan Cape Town have a much higher usage/utilisation rate and, consequently, utilisation ratio than students whose home address is within metropolitan Cape Town (by 70,3 and 70,1 per cent, respectively). This patient-specific finding, therefore, is compatible with Research Hypothesis VIIIa of the UCT-SHS study.

Figure 5.33 Usage/utilisation rate per 1 000 students in students presenting at the UCT-SHS-MHS (1991-1993) stratified by students who reside in PCGs within metropolitan Cape Town versus students who reside in PCGs and countries outside metropolitan Cape Town.



Refer to Table 5.168 for values of usage/utilisation rates.

Table 5.168 Usage/utilisation rate per 1 000 students and utilisation ratio in students presenting at the UCT-SHS-MHS (1991-1993) stratified by students who reside in PCGs within metropolitan Cape Town versus students who reside in PCGs and countries outside metropolitan Cape Town.

PCGs and countries outside metropolitan Cape Town	Usage/utilisation rate per 1 000 students	Deviation from mean usage/utilisation rate per 1 000 students	Utilisation ratio
Students residing within metropolitan Cape Town	30,0	-9,1	0,77
Students residing outside metropolitan Cape Town	51,1	+12,0	1,31
Mean	39,1	-	1,00

(ii) Clinical/diagnostic-specific data

– Major diagnostic categories

Table 5.169 demonstrates that, for all major diagnostic categories, students who reside in PCGs and countries outside metropolitan Cape Town have a generally considerably higher usage/utilisation (prevalence) rate and, consequently, utilisation (prevalence) ratio than students who reside in PCGs within metropolitan Cape Town (by 61,8 and 62,0 per cent for affective disorder, by 45,9 and 46,4 per cent for adjustment disorder, by 93,8 and 93,0 per cent for V-codes, by 87,3 and 88,9 per cent for anxiety (neurotic) disorder, by 69,8 and 68,8 per cent for "other" disorders and by 69,3 and 68,8 per cent for total (combined) disorders). These clinical findings therefore are consistent with Research Hypothesis VIIIa for all major diagnostic categories employed in the UCT-SHS study.

Table 5.169 Usage/utilisation (prevalence) rate per 1 000 students and utilisation (prevalence) ratio for major diagnostic categories in students presenting at the UCT-SHS-MHS (1991-1993) stratified by students who reside in PCGs within metropolitan Cape Town versus students who reside in PCGs and countries outside metropolitan Cape Town.

(a) Affective disorder			
PCG/country	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Within metropolitan Cape Town	3,4	-0,9	0,79
Outside metropolitan Cape Town	5,5	+1,2	1,28
Mean	4,3	-	1,00
(b) Adjustment disorder			
PCG/country	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Within metropolitan Cape Town	9,8	-1,8	0,84
Outside metropolitan Cape Town	14,3	+2,7	1,23
Mean	11,6	-	1,00
(c) V-codes			
PCG/country	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Within metropolitan Cape Town	6,5	-2,7	0,71
Outside metropolitan Cape Town	12,6	+3,4	1,37
Mean	9,2	-	1,00
(d) Anxiety (neurotic) disorder			
PCG/country	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Within metropolitan Cape Town	5,5	-2,1	0,72
Outside metropolitan Cape Town	10,3	+2,7	1,36
Mean	7,6	-	1,00
(e) "Other" disorders			
PCG/country	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Within metropolitan Cape Town	5,3	-1,6	0,77
Outside metropolitan Cape Town	9,0	+2,1	1,30
Mean	6,9	-	1,00
(f) Total (combined) disorders			
PCG/country	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Within metropolitan Cape Town	30,6	-9,1	0,77
Outside metropolitan Cape Town	51,8	+12,1	1,30
Mean	39,7	-	1,00

Number of missing responses = 27 for patients and 31 for diagnoses.

– Individual V-codes

Table 5.170 demonstrates that, for all individual V-codes, students who reside in PCGs and countries outside metropolitan Cape Town have a generally considerably higher usage/utilisation (prevalence) rate and, consequently, utilisation (prevalence) ratio than students who reside in PCGs within metropolitan Cape Town (by 96,3 and 95,8 per cent for relationship problem, by 31,6 and 32,6 per cent for family problem, by 142,9 and 142,2 per cent for complicated bereavement, by 125,0 and 123,9 per cent for pre- and post-termination counselling for unplanned/unwanted pregnancy, by 160,0 and 157,1 per cent for academic problem and by 93,8 and 93,0 per cent for total (combined) V-codes. These clinical findings therefore are consistent with Research Hypothesis VIIIa for all individual V-codes employed in the UCT-SHS study.

Table 5.170 Usage/utilisation (prevalence) rate per 1 000 students and utilisation (prevalence) ratio for individual V-codes in students presenting at the UCT-SHS-MHS (1991-1993) stratified by students who reside in PCGs within metropolitan Cape Town versus students who reside in PCGs and countries outside metropolitan Cape Town.

(a) Relationship problem			
PCG/country	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Within metropolitan Cape Town	2,7	-1,1	0,71
Outside metropolitan Cape Town	5,3	+1,5	1,39
Mean	3,8	-	1,00
(b) Family problem			
PCG/country	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Within metropolitan Cape Town	1,9	-0,3	0,86
Outside metropolitan Cape Town	2,5	+0,3	1,14
Mean	2,2	-	1,00
(c) Complicated bereavement			
PCG/country	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Within metropolitan Cape Town	0,7	-0,4	0,64
Outside metropolitan Cape Town	1,7	+0,6	1,55
Mean	1,1	-	1,00
(d) Pre- and post-termination counselling for unplanned/unwanted pregnancy			
PCG/country	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Within metropolitan Cape Town	0,8	-0,4	0,67
Outside metropolitan Cape Town	1,8	+0,6	1,50
Mean	1,2	-	1,00

(e) Academic problem			
PCG/country	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Within metropolitan Cape Town	0,5	-0,4	0,56
Outside metropolitan Cape Town	1,3	+0,4	1,44
Mean	0,9	-	1,00
(f) Total (combined) V-codes			
PCG/country	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Within metropolitan Cape Town	6,5	-2,7	0,71
Outside metropolitan Cape Town	12,6	+3,4	1,37
Mean	9,2	-	1,00

Number of missing responses = unknown.

5.1.4.3 Objective 4 (number of consultations)

Research Hypothesis VIIIb of the UCT-SHS study is as follows:

> *Students whose home address (as opposed to term address for out-of-town students) is outside metropolitan Cape Town are likely to require more consultations mental disorders at the UCT-SHS-MHS than their peers whose home address is within metropolitan Cape Town.*

In this objective Research Hypothesis VIIIb is either confirmed or rejected according to the mean number of consultations for UCT-SHS-MHS attendees (patients).

(a) Non-abridged format

(i) PCGs within metropolitan Cape Town

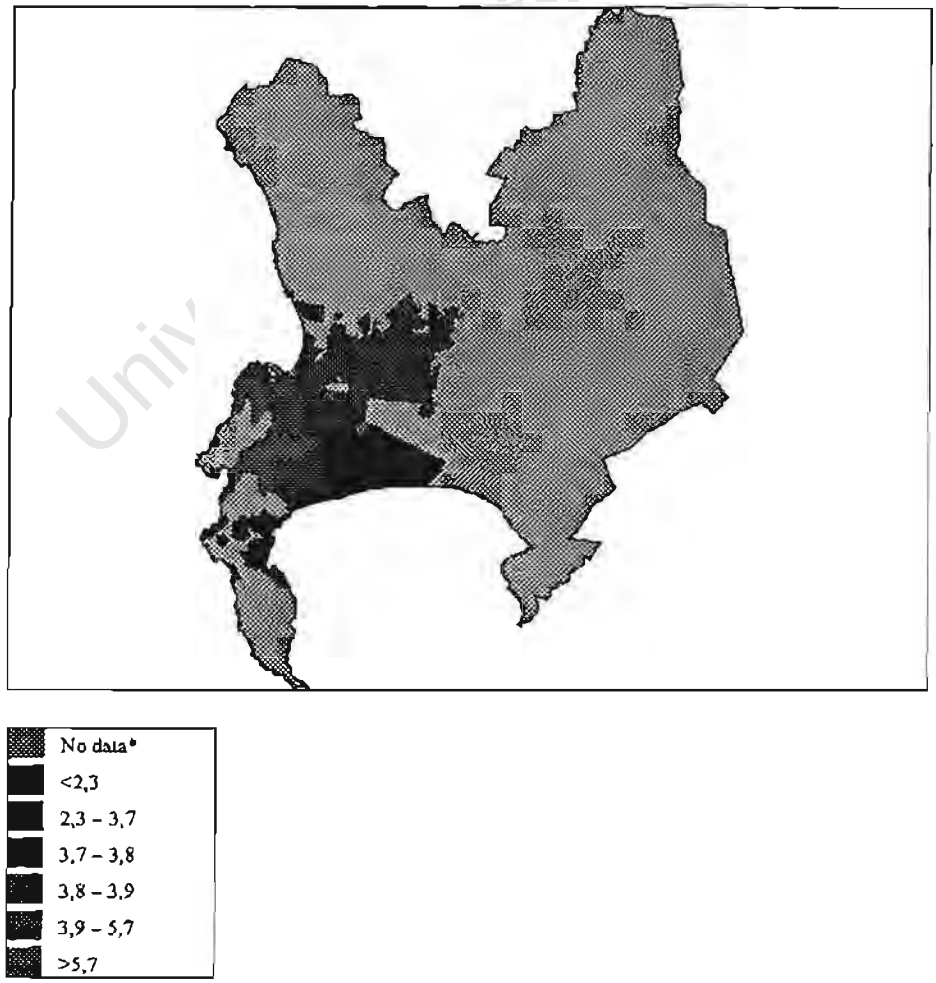
Table 5.171 demonstrates and Figure 5.34 illustrates that 3 441 individual consultations were made by 905 documented patients attending the UCT-SHS-MHS from 1991 to 1993 – a mean of 3,8 consultations per patient with a range of 1 to 29 consultations. Students whose home address is within Nyanga East were responsible for the highest mean number of consultations per student followed by Langa and Observatory-Woodstock resident students (all greater than 4,9 consultations per patient). Students whose home address is within the Greater Rondebosch area, on the other hand, were responsible for the highest total number of consultations followed by City-Sea Point and Muizenberg-Ocean View resident students (all greater than 160 consultations).

Table 5.171 Frequency, percentages, mean number and range of consultations (N=3 441) in students presenting at the UCT-SHS-MHS (1991-1993) stratified by PCGs within metropolitan Cape Town.

PCG within metropolitan Cape Town		n	%	No. of cons mean	No. of cons SD	Range
Code No. 15:	Maitland-Goodwood	128	8,6	3,8	3,0	1 to 11 consultations
Code No. 16:	Parow-Blackheath	42	2,8	3,8	2,9	1 to 10 consultations
Code No. 18:	Greater Rondebosch	535	35,7	3,8	3,2	1 to 16 consultations
Code No. 19:	Langa	17	1,1	5,7	6,4	1 to 13 consultations
Code No. 20:	Guguletu	14	0,9	2,3	2,0	1 to 6 consultations
Code No. 21:	Nyanga East	19	1,3	6,3	6,7	2 to 14 consultations
Code No. 22:	Greater Athlone	107	7,1	3,3	2,5	1 to 10 consultations
Code No. 23:	Khayelitsha	6	0,4	1,5	0,6	1 to 2 consultations
Code No. 24:	Mitchell's Plain	29	1,9	2,9	2,3	1 to 7 consultations
Code No. 25:	Greater Wynberg	101	6,7	3,9	3,2	1 to 13 consultations
Code No. 26:	Observatory-Woodstock	124	8,3	5,0	5,3	1 to 26 consultations
Code No. 27:	Muizenberg-Ocean View	178	11,9	3,7	4,0	1 to 21 consultations
Code No. 28:	City-Sea Point	197	13,2	3,9	3,1	1 to 12 consultations
Sub-total		1 497	100,0	3,8	3,4	1 to 26 consultations

Number of missing responses = Unknown for patients.

Figure 5.34 Map depicting the mean number of consultations per student (N=932) presenting at the UCT-SHS-MHS (1991-1993) stratified by PCGs within metropolitan Cape Town.



*Non-suburban (including industrial) areas within metropolitan Cape Town and areas outside metropolitan Cape Town.

(ii) PCGs outside metropolitan Cape Town but within the Western Cape Health Region (WCHR)

Table 5.172 demonstrates that students whose home address is within the Stellenbosch-Paarl-Franschhoek region were responsible for the highest mean number of consultations per student followed by Eerste Rivier-Grabouw-Bredasdorp resident students (both greater than or equal to 3,4 consultations per patient). Students whose home address is within the Stellenbosch-Paarl-Franschhoek region were also responsible for the highest total number of consultations followed by George-Cape West Coast resident students (both greater than 20 consultations).

Table 5.172 Frequency, percentages, mean number and range of consultations (N=3 441) in students presenting at the UCT-SHS-MHS (1991-1993) stratified by PCGs outside metropolitan Cape Town but within the Western Cape Health Region (WCHR).

PCG outside metropolitan Cape Town but within WCHR		n	%	No. of cons mean	SD	Range
Code No. 7:	George-Cape West Coast	22	26,2	2,4	2,6	1 to 9 consultations
Code No. 8:	Robertson-Cape Mid Coast	0	0,0	N/A	N/A	N/A
Code No. 9:	Ceres-Worcester-Ladismith	3	3,6	1,5	0,7	1 to 2 consultations
Code No. 10:	Laingsburg-Beaufort West-De Aar	0	0,0	N/A	N/A	N/A
Code No. 11:	Eerste Rivier-Grabouw-Bredasdorp	17	20,2	3,4	1,9	1 to 6 consultations
Code No. 12:	Malmesbury-Citrusdal-Mamre	0	0,0	N/A	N/A	N/A
Code No. 13:	Atlantis	0	0,0	N/A	N/A	N/A
Code No. 14:	Hopefield-Vredenburg-Saldanha	0	0,0	N/A	N/A	N/A
Code No. 17:	Stellenbosch-Paarl-Franschhoek	42	50,0	6,0	6,2	1 to 19 consultations
Sub-total		84	100,0	3,7	4,0	1 to 19 consultations

Number of missing responses = Unknown for patients.

(iii) PCGs outside metropolitan Cape Town and outside the Western Cape Health Region (WCHR) but within South Africa

Table 5.173 demonstrates that students whose home address is within the Port Elizabeth-Cape Midwest region were responsible for the highest mean number of consultations per student followed by Orange Free State resident students (both greater than 4,0 consultations per patient). Students whose home address is within the Transvaal (old provincial designation) were responsible for the highest total number of consultations followed by Natal and East London-Ciskei-Tembu resident students (all greater than 180 consultations).

Table 5.173 Frequency, percentages, mean number and range of consultations (N=3 441) in students presenting at the UCT-SHS-MHS (1991-1993) stratified by PCGs outside metropolitan Cape Town and outside the Western Cape Health Region (WCHR) but within South Africa.

PCG outside metropolitan Cape Town and outside WCHR but within South Africa	n	%	No. of cons mean	SD	Range
Code No. 1: Transvaal	830	56,2	3,5	3,1	1 to 20 consultations
Code No. 2: Natal	217	14,7	3,6	3,2	1 to 14 consultations
Code No. 3: Orange Free State	78	5,3	4,1	6,8	1 to 29 consultations
Code No. 5: East London-Ciskei-Tembu	185	12,5	3,7	2,9	1 to 13 consultations
Code No. 6: Port Elizabeth-Cape Midwest	146	9,9	4,2	3,6	1 to 15 consultations
Code No. 29: Lamberts Bay-Springbok-Alexander Bay	10	0,7	10,0	N/A	1 to 10 consultations
Code No. 30: Kimberley-Upington	10	0,7	1,4	0,5	1 to 2 consultations
Subtotal	1 476	100,0	3,6	3,1	1 to 29 consultations

Number of missing responses = Unknown for patients.

(iv) African and non-African countries outside South Africa

Table 5.174 demonstrates that with the exception of Namibia (PCG 5), this set of analyses has not been performed (for technical reasons) for this particular grouping of countries outside South Africa.

Table 5.174 Frequency, percentages, mean number and range of consultations (N=3 441) in students presenting at the UCT-SHS-MHS (1991-1993) stratified by African and non-African countries outside South Africa.

Country	n	%	No. of cons.		Range
			mean	SD	
Kenya	NS	NS	NS	NS	NS
Lesotho	NS	NS	NS	NS	NS
Mauritius	NS	NS	NS	NS	NS
Namibia	8	2,1	1,6	1,3	1 to 4 consultations
Swaziland	NS	NS	NS	NS	NS
Zambia	NS	NS	NS	NS	NS
Zimbabwe	NS	NS	NS	NS	NS
Non-African countries	NS	NS	NS	NS	NS
Subtotal	384	100,0	4,8	4,8	1 to 20 consultations

Number of missing responses = Unknown for patients.

(b) Abridged format

Table 5.175 demonstrates that students whose home address is African and non-African countries outside South Africa were responsible for the highest mean number of consultations per student followed by metropolitan Cape Town resident students (both greater than 3,7 consultations per patient). Students whose home address is within metropolitan Cape Town were responsible for the highest total number of consultations followed by outside metropolitan Cape Town and outside the WCHR but within South Africa resident students (both greater than 1 400 consultations). Table 5.176 demonstrates that residence (home address) did not produce a statistically significant (p=0,054) result in the number of consultations required by the student.

Table 5.175 Frequency, percentages, mean number and range of consultations (N=3 441) in students presenting at the UCT-SHS-MHS (1991-1993) stratified by PCG groupings within South Africa together with African and non-African countries outside South Africa.

PCG	n	%	No. of cons		Range
			mean	SD	
Within metropolitan Cape Town	1 497	43,5	3,8	3,4	1 to 26 consultations
Outside metropolitan Cape Town but within WCHR	84	2,4	3,7	4,0	1 to 19 consultations
Outside metropolitan Cape Town and outside WCHR but within South Africa	1 476	42,9	3,6	3,4	1 to 29 consultations
African and non-African countries outside South Africa	384	11,2	4,8	4,2	1 to 23 consultations
Total	3 441	100,0	3,8	3,5	1 to 29 consultations

Number of missing persons = 27 for patients.

Table 5.176 ANOVA summary table for the mean number of consultations by PCG groupings within South Africa together with African and non-African countries outside South Africa in students presenting at the UCT-SHS-MHS (1991-1993).

Residence (home address)	Df	Sum of squares	Mean square	F-ratio	Prob >F
Regression model	3	92,7	30,9	2,55	$0,054^{NS}$
Error	902	10 890,4	12,1		
Corrected total	905	10 983,1			

$R^2 = 0,008$

(c) Highly abridged format

Table 5.177 demonstrates that the mean number of consultations per student and the total number of consultations is higher for students whose home address is outside metropolitan Cape Town than students whose home address is within metropolitan Cape Town (by 0,5 and 29,9 per cent, respectively) who attend the UCT-SHS-MHS from 1991 to 1993. As the ANOVA previously appearing in the abridged format for residence (home address) (Table 5.176) produced a non-significant (Df = 3; Prob >F = 0,054) result, no *t*-test has been performed (invalid procedure) for this particular format of the residence (home address)-specific variable. This finding therefore rejects Research Hypothesis VIIIb for Objective 4 of the UCT-SHS study.

Table 5.177 Frequency, percentages, mean number and range of consultations (N=3 441) in students presenting at the UCT-SHS-MHS (1991-1993) stratified by PCGs within metropolitan Cape Town versus PCGs and countries outside metropolitan Cape Town.

PCG/country	n	%	No. cons		Range
			mean	SD	
Within metropolitan Cape Town	1 497	43,5	3,8	3,4	1 to 26 consultations
Outside metropolitan Cape Town	1 944	56,5	3,8	3,5	1 to 29 consultations
Total	3 441	100,0	3,8	3,5	1 to 29 consultations

Number of missing persons = 27 for patients.

5.1.5 Financial assistance

5.1.5.1 Objective 1 (attendees) – Descriptive data

(a) Non-abridged format

Table 5.178 demonstrates that students who are ineligible for and not receiving UCT-administered financial assistance were responsible for the greatest number of attendees at the UCT-SHS-MHS from 1991 to 1993 followed by students receiving between R5 000 and R9 999 of UCT-administered financial aid and students receiving less than R5 000 of UCT-administered financial aid (all greater than 60 attendees).

Table 5.178 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) stratified by financial aid eligibility and value.

Financial aid eligibility and value	n	%
<R5 000	70	7,7
R 5 000-R 9 999	115	12,7
R10 000-R14 999	32	3,5
≥R15 000	10	1,1
Ineligible/DNA[1]	678	74,9
Total	905	100,0

Number of missing responses = 27.
[1]DNA = Did not apply for financial aid – the vast majority of these students would be ineligible for and not receiving financial assistance as the availability of financial aid to financially disadvantaged students (who would qualify for financial aid) is widely advertised both on (and off) campus.

(b) Abridged format

(i) Patient-specific data

Table 5.179 demonstrates that there was a greater number of students who are ineligible for and not receiving UCT-administered financial assistance than students who are eligible for and receiving this assistance (by 198,7 per cent) who attended the UCT-SHS-MHS from 1991 to 1993.

Table 5.179 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) stratified by students who are eligible for and receiving financial aid versus students who are ineligible for and not receiving financial aid.

Financial aid status	n	%
Eligible	227	25,1
Ineligible/DNA[1]	678	74,9
Total	905	100,0

Number of missing responses = 27.
[1]DNA = Did not apply for financial aid – the vast majority of these students would be ineligible for and not receiving financial assistance as the availability of financial aid to financially disadvantaged students (who would qualify for financial aid) is widely advertised both on (and off) campus.

(ii) Clinical/diagnostic-specific data

– Major diagnostic categories

Table 5.180 demonstrates that students who are ineligible for and not receiving UCT-administered financial aid were diagnosed as presenting at the UCT-SHS-MHS with a greater number of all major diagnostic categories than students who are eligible for and receiving UCT-administered financial aid (by 234,8 per cent for affective disorders, by 200,0 per cent for adjustment disorders, by 147,5 per cent for V-codes, by 166,7 per cent for anxiety (neurotic) disorders, by 371,4 per cent for "other" disorders and by 203,5 per cent for total (combined) disorders, respectively) – however, only "other" disorders produced a statistically significant (p=0,019) difference. For students who are ineligible for and not receiving UCT-administered financial aid, adjustment disorder was the most common presenting major diagnostic category as well as the

most frequently coded major diagnostic category for students who are eligible for and receiving UCT-administered financial aid. Only "other" disorders produced a statistically significant (p=0,019) result in favour of students who are ineligible for and not receiving UCT-administered financial aid.

Table 5.180 Major diagnostic categories of students who are eligible for and receiving financial aid (N=227) versus students who are ineligible for and not receiving financial aid (N=678) presenting at the UCT-SHS-MHS (1991-1993).

Major diagnostic category	Eligible		Ineligible/DNA[1]		Unadjusted OR (with 95% CI)	Df	χ^2	p
	n	%	n	%				
Affective disorder	23	10,1	77	11,1	0,9 (0,5- 1,5)	1	0,2	$0,662^{NS}$
Adjustment disorder	68	29,8	204	29,8	1,0 (0,7 - 1,4)	1	0,0	$0,921^{NS}$
V-codes	61	26,8	151	21,8	1,3 (0,9 - 1,9)	1	2,4	$0,125^{NS}$
Anxiety (neurotic) disorder	48	21,1	128	18,5	1,2 (0,8 - 1,7)	1	0,7	$0,395^{NS}$
"Other" disorders	28	12,3	132	19,1	0,6 (0,4 - 0,9)	1	5,5	$0,019^{Sig}$
Total	228	100,0	692	100,0	-	4	7,1	$0,129^{NS}$

Number of missing responses = 27 for patients and 31 for diagnoses.
[1]DNA = Did not apply for financial aid – the vast majority of these students would be ineligible for and not receiving financial assistance as the availability of financial aid to financially disadvantaged students (who would qualify for financial aid) is widely advertised both on (and off) campus.

– Individual V-codes

Table 5.181 demonstrates that students who are ineligible for and not receiving UCT-administered financial aid were diagnosed as presenting at the UCT-SHS-MHS with a greater number of all individual V-codes than students who are eligible for and receiving UCT-administered financial aid (by 200,0 per cent for relationship problems, by 157,1 per cent for family problems, by 36,4 per cent for complicated bereavements, by 266,7 per cent for pre- and post-termination counselling for unplanned/unwanted pregnancies, by 50,0 per cent for academic problems and by 147,5 per cent for total (combined) V-codes, respectively) – however, none of these individual V-codes produced a statistically significant difference. For students who are ineligible for and not receiving UCT-administered financial aid, relationship problem was the most common presenting individual V-code as well as the most frequently coded individual V-code for students who are eligible for and receiving UCT-administered financial aid. However, none of the individual V-codes produced a statistically significant result in favour of either students who are eligible for and receiving UCT-administered financial aid or students who are ineligible for and not receiving UCT-administered financial aid.

Table 5.181 Individual V-codes of students who are eligible for and receiving financial aid (N=227) versus students who are ineligible for and not receiving financial aid (N=678) presenting at the UCT-SHS-MHS (1991-1993).

Individual V-code	Eligible		Ineligible/DNA[1]		Unadjusted OR (with 95% CI)	Df	χ^2	p
	n	%	n	%				
Relationship problem	22	36,1	66	43,7	0,7 (0,4- 1,4)	1	1,1	0,307[NS]
Family problem	14	23,0	36	23,8	1,0 (0,4 - 2,0)	1	0,0	0,890[NS]
Complicated bereavement	11	18,0	15	9,9	2,0 (0,8 - 5,0)	1	2,7	0,104[NS]
Unplanned/unwanted pregnancy	6	9,8	22	14,6	0,6 (0,2 - 1,8)	1	0,9	0,337[NS]
Academic problem	8	13,1	12	8,0	1,8 (0,6 - 4,9)	1	1,4	0,244[NS]
Total V-codes	61	100,0	151	100,0	-	4	4,9	0,296[NS]

Number of missing responses = unknown.
[1]DNA = Did not apply for financial aid – the vast majority of these students would be ineligible for and not receiving financial assistance as the availability of financial aid to financially disadvantaged students (who would qualify for financial aid) is widely advertised both on (and off) campus.

5.1.5.2 Objective 2 (patients versus controls) and Objective 3 (patients versus the total student community)

Research Hypothesis IXa of the UCT-SHS study is as follows:

> *Students who are receiving UCT-administered financial aid are more likely to present with mental disorders at the UCT-SHS-MHS than their peers who are either ineligible for or not receiving UCT-administered financial aid.*

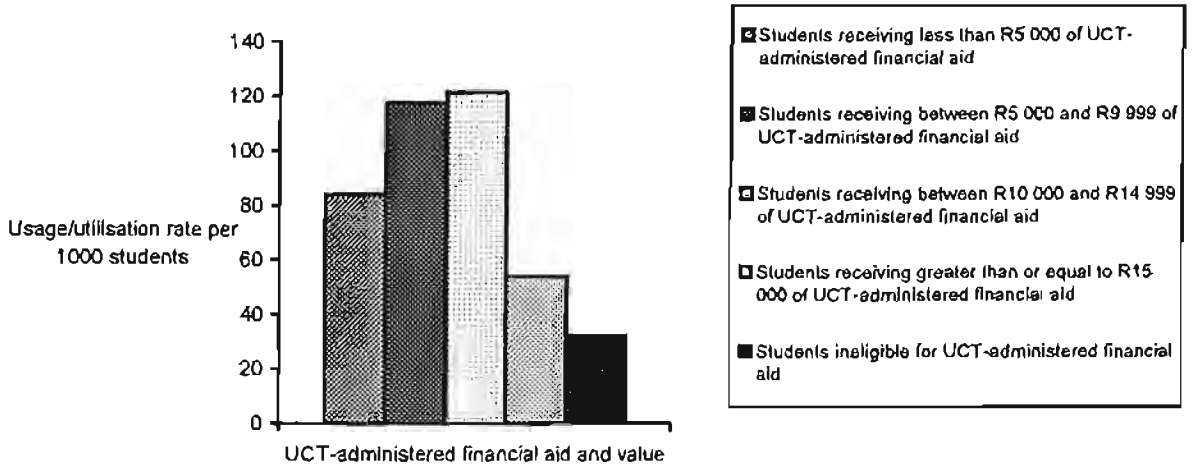
In these objectives Research Hypothesis IXa is either confirmed or rejected according to the unadjusted odds ratio or χ^2 test (p-value) for UCT-SHS-MHS attendees (patients) versus UCT-SHS medical attendees (controls) [Objective 2] or to additional usage/utilisation rates per 1 000 students and utilisation ratios for patients versus registered UCT students (the total student community) [Objective 3].

(a) Non-abridged format

Unadjusted ORs for patients versus controls and patients versus the total student community where the individual subcategory is compared to the remaining subcategories by means of contingency (2x2) tables have not been employed for this particular format of the financial aid-specific variable.

Figure 5.35 illustrates and Table 5.182 demonstrates that students receiving between R10 000 and R14 999 of UCT-administered financial aid have the highest usage/utilisation rate and, consequently, utilisation ratio followed by students receiving between R5 000 and R9 999 of UCT-administered financial aid and students receiving less than R5 000 of UCT-administered financial aid (all greater than 80,0 attendees per 1 000 students).

Figure 5.35 Usage/utilisation rate per 1 000 students in students presenting at the UCT-SHS-MHS (1991-1993) stratified by financial aid eligibility and value.



Refer to Table 5.182 for values of usage/utilisation rates.

Table 5.182 Usage/utilisation rate per 1 000 students and utilisation ratio in students presenting at the UCT-SHS-MHS (1991-1993) stratified by financial aid eligibility and value.

UCT-administered financial aid and value	Usage/utilisation rate per 1 000 students	Deviation from mean usage/utilisation rate per 1 000 students	Utilisation ratio
Students receiving less than R5 000 of UCT-administered financial aid	84,0	+44,9	2,15
Students receiving between R5 000 and R9 999 of UCT-administered financial aid	117,1	+78,0	2,99
Students receiving between R10 000 and R14 999 of UCT-administered financial aid	121,2	+82,1	3,10
Students receiving greater than R15 000 of UCT-administered financial aid	53,8	+14,7	1,38
Students ineligible for UCT-administered financial aid	32,4	-6,7	0,83
Mean	39,1	.	1,00

(b) Abridged format

(i) Patient-specific data

Table 5.183 demonstrates that students who are eligible for and receiving UCT-administered financial assistance are also slightly more likely than students who are ineligible for and not receiving UCT-administered financial assistance to present at the UCT-SHS-MHS than attend the UCT-SHS with purely medical complaints as reflected by a statistically insignificant OR for patients versus controls which corresponds to a likelihood ratio ($\%_1:\%_2$) of 1,101. In fact students who are eligible for and receiving UCT-administered financial assistance are 6,3 per cent overrepresented (with a standardised residual of +1,0) and students who are ineligible for and not receiving UCT-administered financial assistance are 6,7 per cent underrepresented (with a standardised residual of -0,5) amongst UCT-SHS-MHS attendees when correlated with medical controls in order to produce expected frequencies based on an OR of 1,0. Adjusted ORs

demonstrate that the statistically insignificant relationship between patients and controls is preserved when adjusting for gender, race/population group and age.

In addition, the results in Table 5.184 suggest that students who are eligible for and receiving UCT-administered financial assistance are more likely than students who are ineligible for and not receiving UCT-administered financial assistance to present at the UCT-SHS-MHS as reflected by a statistically significant (p=0,000) positive OR for patients versus the total student community which corresponds to a likelihood ratio ($\%_1$:$\%_3$) of 2,561. Here students who are eligible for and receiving UCT-administered financial assistance are 142,3 per cent overrepresented (with a standardised residual of +5,8) and students who are ineligible for and not receiving UCT-administered financial assistance are 16,4 per cent underrepresented (with a standardised residual of -5,1) amongst UCT-SHS-MHS attendees when correlated with the total student community in order to produce expected frequencies based on an OR of 1,0. Adjusted ORs demonstrate that the statistically significant (p=0,000) relationship between patients and controls is preserved when adjusting for gender, race/population group and age. These findings therefore confirm Research Hypothesis IXa for Objectives 2 and 3 of the UCT-SHS study.

Table 5.183 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of controls (N=1 924) stratified by students who are eligible for and receiving financial aid versus students who are ineligible for and not receiving financial aid.

(a) Unadjusted ORs and χ^2 tests

Financial aid status	n_1	$\%_1$	n_2	$\%_2$	Unadjusted OR (with 95% CI)	Df	χ^2	p
Eligible	227	25,1	437	22,8	1,1 (0,9 - 1,4)	1	1,8	$0,177^{NS}$
Ineligible/DNA[1]	678	74,9	1 482	77,2	-	-	-	-
Total	905	100,0	1 919	100,0	-	-	-	-

(b) Expected frequencies

Financial aid status	Observed frequency$_1$	Expected frequency$_1$	Difference between observed and expected frequency$_1$	Observed frequency$_2$	Expected frequency$_2$	Difference between observed and expected frequency$_2$
Eligible	227	212,8	+14,2 (+6,7%)	437	451,2	-14,2 (-3,1%)
Ineligible/DNA[1]	678	692,2	-14,2 (-2,1%)	1 482	1 467,8	+14,2 (+1,0%)
Total	905	905,0	-	1 919	1 919,0	-

(c) ORs adjusted for gender, race/population group and age

Variable	SE	Adjusted OR (with 95% CI)	Df	χ^2	Prob >χ^2
Intercept	0,301	[5,093]	1	29,3	$0,000^{Sig}$
Eligible	0,110	1,1 (0,9 - 1,4)	1	1,2	$0,279^{NS}$
Model fit	-	-	6	88,1	$0,000^{Sig}$

Number of missing responses = 27 for patients and 5 for controls.
[1]DNA = Did not apply for financial aid – the vast majority of these students would be ineligible for and not receiving financial assistance as the availability of financial aid to financially disadvantaged students (who would qualify for financial aid) is widely advertised on (and off) campus.
n_1 and $\%_1$ refer to patients.
Observed frequency$_1$ and expected frequency$_1$ refer to patients.
n_2 and $\%_2$ refer to controls.
Observed frequency$_2$ and expected frequency$_2$ refer to controls.

Table 5.184 Frequency and percentages of patients (N=932) presenting at the UCT-SHS-MHS (1991-1993) compared to corresponding frequency and percentages of the total student community (N=23 158) stratified by students who are eligible for and receiving financial aid versus students who are ineligible for and not receiving financial aid.

(a) Unadjusted ORs and χ^2 tests

Financial aid status	n_1	$\%_1$	n_3	$\%_3$	Unadjusted OR (with 95% CI)	Df	χ^2	p
Eligible	227	25,1	2 264	9,8	3,3 (2,8-3,9)	1	250,2	$0,000^{Sig}$
Ineligible/DNA[1]	678	74,9	20 894	90,2	-	-	-	-
Total	905	100,0	23 158	100,0	-	-	-	-

(b) Expected frequencies

Financial aid status	Observed frequency$_1$	Expected frequency$_1$	Difference between observed and expected frequency$_1$	Observed frequency$_3$	Expected frequency$_3$	Difference between observed and expected frequency$_3$
Eligible	227	93,7	+133,3 (+142,3%)	2 264	2 397,3	-133,3 (-5,6%)
Ineligible/DNA[1]	678	811,3	-133,3 (-16,4%)	20 894	20 760,7	+133,3 (+0,6%)
Total	905	905,0	-	23 158	23 158,0	-

(c) ORs adjusted for gender, race/population group and age

Variable	SE	Adjusted OR (with 95% CI)	Df	χ^2	Prob >χ^2
Intercept	0,232	[18,298]	1	157,6	$0,000^{Sig}$
Eligible	0,095	2,3 (1,9 - 2,8)	1	76,4	$0,000^{Sig}$
Model fit	-	-	6	396,4	$0,000^{Sig}$

Number of missing responses = 27 for patients.

[1]DNA = Did not apply for financial aid – the vast majority of these students would be ineligible for and not receiving financial assistance as the availability of financial aid to financially disadvantaged students (who would qualify for financial aid) is widely advertised on (and off) campus.

n_1 and $\%_1$ refer to patients.

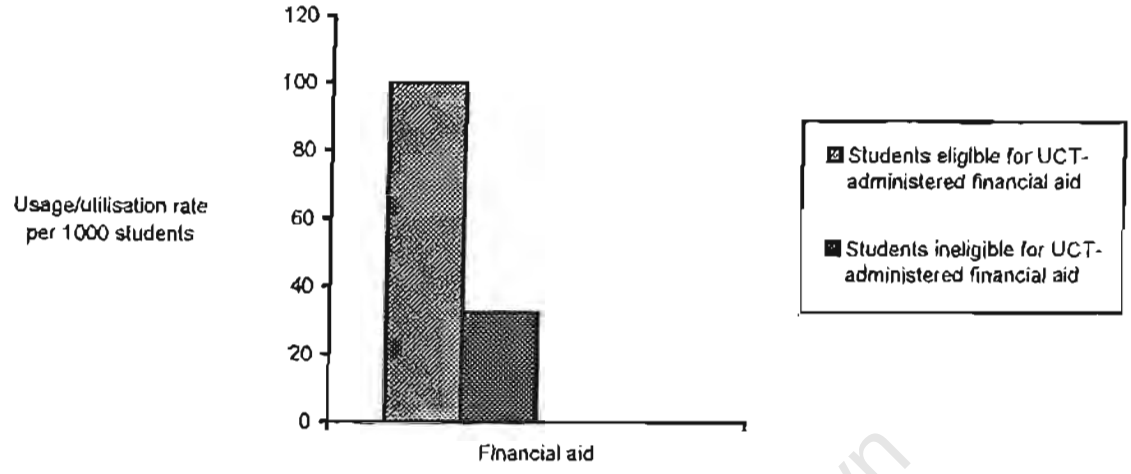
Observed frequency$_1$ and expected frequency$_1$ refer to patients.

n_3 and $\%_3$ refer to the total student community.

Observed frequency$_3$ and expected frequency$_3$ refer to the total student community.

Figure 5.36 illustrates and Table 5.185 demonstrates that students who are eligible for and receiving UCT-administered financial assistance have a considerably higher usage/utilisation rate and, consequently, utilisation ratio than students who are ineligible for and not receiving UCT-administered financial assistance (by 209,6 and 208,4 per cent, respectively). This patient-specific finding, therefore, is compatible with Research Hypothesis IXa of the UCT-SHS study.

Figure 5.36 Usage/utilisation rate per 1 000 students in students presenting at the UCT-SHS-MHS (1991-1993) stratified by students who are eligible for and receiving financial aid versus students who are ineligible for and not receiving financial aid.



Refer to Table 5.185 for values of usage/utilisation rates.

Table 5.185 Usage/utilisation rate per 1 000 students and utilisation ratio in students presenting at the UCT-SHS-MHS (1991-1993) stratified by students who are eligible for and receiving financial aid versus students who are ineligible for and not receiving financial aid.

Financial aid	Usage/utilisation rate per 1 000 students	Deviation from mean usage/utilisation rate per 1 000 students	Utilisation ratio
Students eligible for UCT-administered financial aid	100,3	+61,2	2,56
Students ineligible for UCT-administered financial aid	32,4	-6,7	0,83
Mean	39,1	-	1,00

(ii) Clinical/diagnostic-specific data

– Major diagnostic categories

Table 5.186 demonstrates that, for all major diagnostic categories, students eligible for and receiving UCT-administered financial aid have a generally considerably higher usage/utilisation (prevalence) rate and, consequently, utilisation (prevalence) ratio than students who are ineligible for and not receiving UCT-administered financial aid (by 175,7 and 175,6 per cent for affective disorder, by 206,1 and 208,3 per cent for adjustment disorder, by 273,6 and 274,4 per cent for V-codes, by 247,5 and 248,8 per cent for anxiety (neurotic) disorder, by 96,8 and 97,8 per cent for "other" disorders and by 204,2 and 206,0 per cent for total (combined) disorders). These clinical findings therefore are consistent with Research Hypothesis IXa for all major diagnostic categories employed in the UCT-SHS study.

Table 5.186 Usage/utilisation (prevalence) rate per 1 000 students and utilisation (prevalence) ratio for major diagnostic categories in students presenting at the UCT-SHS-MHS (1991-1993) stratified by students who are eligible for and receiving financial aid versus students who are ineligible for and not receiving financial aid.

(a) Affective disorder			
Financial aid	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Eligible	10,2	+5,9	2,37
Ineligible/DNA[1]	3,7	-0,6	0,86
Mean	4,3	-	1,00
(b) Adjustment disorder			
Financial aid	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Eligible	30,0	+18,4	2,59
Ineligible/DNA[1]	9,8	-1,8	0,84
Mean	11,6	-	1,00
(c) V-codes			
Financial aid	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Eligible	26,9	+17,7	2,92
Ineligible/DNA[1]	7,2	-2,0	0,78
Mean	9,2	-	1,00
(d) Anxiety (neurotic) disorder			
Financial aid	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Eligible	21,2	+13,6	2,79
Ineligible/DNA[1]	6,1	-1,5	0,80
Mean	7,6	-	1,00
(e) "Other" disorders			
Financial aid	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Eligible	12,4	+5,5	1,80
Ineligible/DNA[1]	6,3	-0,6	0,91
Mean	6,9	-	1,00
(f) Total (combined) disorders			
Financial aid	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Eligible	100,7	+61,0	2,54
Ineligible/DNA[1]	33,1	-6,6	0,83
Mean	39,7	-	1,00

Number of missing responses = 27 for patients and 31 for diagnoses.
[1]DNA = Did not apply for financial aid – the vast majority of these students would be ineligible for and not receiving financial assistance as the availability of financial aid to financially disadvantaged students (who would qualify for financial aid) is widely advertised both on (and off) campus.

– Individual V-codes

Table 5.187 demonstrates that, for all individual V-codes, students eligible for and receiving UCT-administered financial aid have a generally considerably higher usage/utilisation (prevalence) rate and, consequently, utilisation (prevalence) ratio than students who are ineligible for and not receiving UCT-administered financial aid (by 203,1 and 203,6 per cent for relationship problem, by 264,7 and 266,2 per cent for family problem, by 600,0 and 595,3 per cent for complicated bereavement, by 145,5 and 144,6 per cent for pre- and post-termination counselling for unplanned/unwanted pregnancy, by 483,3 and 480,6 per cent for

academic problem and by 273,6 and 274,4 per cent for total (combined) V-codes. These clinical findings therefore are consistent with Research Hypothesis IXa for all individual V-codes employed in the UCT-SHS study.

Table 5.187 Usage/utilisation (prevalence) rate per 1 000 students and utilisation (prevalence) ratio for individual V-codes in students presenting at the UCT-SHS-MHS (1991-1993) stratified by students who are eligible for and receiving financial aid versus students who are ineligible for and not receiving financial aid.

(a) Relationship problem			
Financial aid	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Eligible	9,7	+5,9	2,55
Ineligible/DNA[1]	3,2	-0,6	0,84
Mean	3,8	-	1,00
(b) Family problem			
Financial aid	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Eligible	6,2	+4,0	2,82
Ineligible/DNA[1]	1,7	-0,5	0,77
Mean	2,2	-	1,00
(c) Complicated bereavement			
Financial aid	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Eligible	4,9	+3,8	4,45
Ineligible/DNA[1]	0,7	-0,4	0,64
Mean	1,1	-	1,00
(d) Pre- and post-termination counselling for unplanned/unwanted pregnancy			
Financial aid	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Eligible	2,7	+1,5	2,25
Ineligible/DNA[1]	1,1	-0,1	0,92
Mean	1,2	-	1,00
(e) Academic problem			
Financial aid	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Eligible	3,5	+2,6	3,89
Ineligible/DNA[1]	0,6	-0,3	0,67
Mean	0,9	-	1,00
(f) Total (combined) V-codes			
Financial aid	**Usage/utilisation (prevalence) rate per 1 000 students**	**Deviation from mean usage/utilisation (prevalence) rate per 1 000 students**	**Utilisation (prevalence) ratio**
Eligible	26,9	+17,7	2,92
Ineligible/DNA[1]	7,2	-2,0	0,78
Mean	9,2	-	1,00

Number of missing responses = 27 for patients and 31 for diagnoses.
[1]DNA = Did not apply for financial aid – the vast majority of these students would be ineligible for and not receiving financial assistance as the availability of financial aid to financially disadvantaged students (who would qualify for financial aid) is widely advertised both on (and off) campus.

5.1.5.3 Objective 4 (number of consultations)

Research Hypothesis IXb of the UCT-SHS study is as follows:

> *Students who are receiving UCT-administered financial aid are likely to require more consultations for mental disorders at the UCT-SHS-MHS than their peers who are either ineligible for or not receiving UCT-administered financial aid.*

In this objective Research Hypothesis IXb is either confirmed or rejected according to the mean number of consultations for UCT-SHS-MHS attendees (patients).

(a) Non-abridged format

Table 5.188 demonstrates that 3 441 individual consultations were made by 905 documented patients attending the UCT-SHS-MHS from 1991 to 1993 – a mean of 3,8 consultations per patient with a range of 1 to 29 consultations. Students receiving greater than R15 000 of UCT-administered financial aid were responsible for the highest mean number of consultations per student followed by students receiving less than R5 000 of UCT-administered financial aid and students receiving between R10 000 and R14 999 of UCT-administered financial aid (all greater than 3,8 consultations per patient). Students ineligible for and not receiving UCT-administered financial aid, on the other hand, were responsible for the highest total number of consultations followed by students receiving between R5 000 and R9 999 of UCT-administered financial aid and students receiving less than R5 000 of UCT-administered financial aid (all greater than 250 consultations).

Table 5.188 Frequency, percentages, mean number and range of consultations (N=3 441) in students presenting at the UCT-SHS-MHS (1991-1993) stratified by financial aid eligibility and value.

Financial aid eligibility and value	n	%	No. of cons		Range
			mean	SD	
<R5 000	268	7,8	3,9	3,4	1 to 19 consultations
R 5 000-R 9 999	381	11,1	3,3	2,6	1 to 12 consultations
R10 000-R14 999	124	3,6	3,9	4,5	1 to 20 consultations
≥R15 000	61	1,8	6,1	8,9	1 to 29 consultations
Ineligible/DNA[1]	2 607	75,8	3,8	3,4	1 to 26consultations
Total	3 441	100,0	3,8	3,5	1 to 29 consultations

Number of missing responses = 27

[1]DNA = Did not apply for financial aid – the vast majority of these students would be ineligible for and not receiving financial assistance as the availability of financial aid to financially disadvantaged students (who would qualify for financial aid) is widely advertised both on (and off) campus.

(b) Abridged format

Table 5.189 demonstrates that the mean number of consultations per student and the total number of consultations is higher for students who are ineligible for and not receiving UCT-administered financial assistance than students who are eligible for and receiving this assistance (by 2,7 and 210,6 per cent, respectively) who attend the UCT-SHS-MHS from 1991 to 1993. The financial assistance-specific

difference between the mean number of consultations per patient is statistically insignificant. This finding therefore rejects Research Hypothesis IXb for Objective 4 of the UCT-SHS study.

Table 5.189 Frequency, percentages, mean number and range of consultations (N=3 441) in students presenting at the UCT-SHS-MHS (1991-1993) stratified by students who are eligible for and receiving financial aid versus students who are ineligible for and not receiving financial aid.

Financial aid status	n	%	No. of cons		Range	Df	t	p
			mean	SD				
Eligible	838	24,4	3,7	3,6	1 to 29 consultations	903,0	0,57	$0,566^{NS}$
Ineligible/DNA[1]	2 603	75,6	3,8	3,4	1 to 26 consultations	-	-	-
Total	3 441	100,0	3,8	3,5	1 to 29 consultations	-	-	-

Number of missing responses = 27 for patients.
[1]DNA = Did not apply for financial aid – the vast majority of these students would be ineligible for and not receiving financial assistance as the availability of financial aid to financially disadvantaged students (who would qualify for financial aid) is widely advertised both on (and off) campus.

5.1.6 Summary of Selected Variables

A comprehensive objective-specific summary of intervariable results appears in Appendix VII. These findings provide an intermediate link between the results detailed in sections 5.1.1 to 5.1.5 and the patient-specific profiles that are outlined below.

5.1.6.1 Objective 1 (attendees)

Profile of the typical UCT-SHS-MHS attendee according to selected demographic, academic, residential (home address) and financial assistance variables from 1991 to 1993:

The typical UCT-SHS-MHS attendee is a 21 year old, English first language speaking White female who is a first year (freshman/fresher) undergraduate Social Science and Humanities student who resides outside metropolitan Cape Town and the Western Cape Health Region but within South Africa (or, if she resides within metropolitan Cape Town, lives within the Greater Rondebosch area) and is not receiving UCT-administered financial assistance.

[Refer to Appendix VIIa for further details.]

5.1.6.2 Objective 2 (patients versus controls)

(a) Patients

Refer to section 5.1.6.1.

(b) Controls

Profile of the typical UCT-SHS attendee who does NOT present at the UCT-SHS-MHS (control) according to selected demographic, academic, residential (home address) and financial assistance variables from 1991 to 1993:

The typical UCT-SHS attendee who does NOT present at the UCT-SHS-MHS (control) is a 21 year old, English first language speaking White male who is a first year (freshman/fresher) undergraduate Social Science and Humanities student who resides outside metropolitan Cape Town and the Western Cape Health Region but within South Africa (or, if he resides within metropolitan Cape Town, lives within the Greater Rondebosch area) and is not receiving UCT-administered financial assistance.

[Refer to Appendix VIIb for further details.]

(c) Patients versus controls

Profile of the typical UCT-SHS-MHS attendee who records a statistically significant positive odds ratio for patients versus controls according to selected demographic, academic, residential (home address) and financial assistance variables from 1991 to 1993:

The typical UCT-SHS-MHS attendee who records a statistically significantly positive odds ratio for patients versus controls is an English first language speaking Coloured female who is an Arts or Social Science and Humanities faculty student who resides within metropolitan Cape Town in Muizenberg-Ocean View.

Profile of the typical UCT-SHS-MHS attendee who records a statistically significant negative odds ratio for patients versus controls according to selected demographic, academic, residential (home address) and financial assistance variables from 1991 to 1993:

The typical UCT-SHS-MHS attendee who records a statistically significantly negative odds ratio for patients versus controls is an IsiXhosa first language speaking African male who is a Commerce or Engineering faculty student who resides outside metropolitan Cape Town and outside the Western Cape Health Region but within South Africa or in African and non-African countries outside South Africa (or, if he resides within metropolitan Cape Town, lives in Langa or Guguletu).

[Refer to Appendix VIIb for further details.]

5.1.6.3 Objective 3 (patients versus total student community)

(a) Patients

Refer to section 5.1.6.1.

(b) Total student community

Profile of the typical student attending the University of Cape Town according to selected demographic, academic, residential (home address) and financial assistance variables from 1991 to 1993:

The typical student attending the University of Cape Town is a 19 year old, English first language speaking White male who is a non-first year (02 to 06) undergraduate Commerce student who resides within the Greater Rondebosch area of metropolitan Cape Town (or, if he resides outside metropolitan Cape Town lives within the Transvaal) and is not receiving UCT-administered financial assistance.

[Refer to Appendix VIIc for further details.]

(c) Patients versus total student community

Profile of the typical UCT-SHS-MHS attendee who records a statistically significant positive odds ratio for patients versus the total student community according to selected demographic, academic, residential (home address) and financial assistance variables from 1991 to 1993:

The typical UCT-SHS-MHS attendee who records a statistically significantly positive odds ratio for patients versus the total student community is a 20 to 24 year old, SeSotho, SeTswana, IsiXhosa or IsiZulu first language speaking African female who is a first year (freshman/fresher) undergraduate Arts or Social Science and Humanities faculty student who resides outside metropolitan Cape Town and the Western Cape Health Region but within South Africa (or, if she resides within metropolitan Cape Town, lives within the Greater Rondebosch area or Nyanga East) and is receiving UCT-administered financial assistance.

Profile of the typical UCT-SHS-MHS attendee who records a statistically significant negative odds ratio for patients versus the total student community according to selected demographic, academic, residential (home address) and financial assistance variables from 1991 to 1993:

The typical UCT-SHS-MHS attendee who records a statistically significantly negative odds ratio for patients versus the total student community is a greater than or equal to 25 year old English first language speaking White male who is a non-first year (02 to 06) postgraduate Commerce, Education, Law or Medical faculty student who resides outside metropolitan Cape Town but within the Western Cape Health Region (or, if he

resides within metropolitan Cape Town, lives in Parow-Blackheath or the Greater Wynberg area) and is not receiving UCT-administered financial assistance.

[Refer to Appendix VIIc for further details.]

(d) Usage/utilisation rate

Profile of the typical member of the UCT student community who is at risk of becoming a UCT-SHS-MHS attendee according to selected demographic, academic, residential (home address) and financial assistance variables from 1991 to 1993:

The typical member of the UCT student community who is at risk of becoming a UCT-SHS-MHS attendee is a 17 year old, non-English (especially SeTswana) first language speaking Black female who is a non-first year (especially second year) undergraduate Arts student who resides outside metropolitan Cape Town and the Western Cape health Region but within South Africa (or, if she resides outside South Africa, lives in either Zambia, Swaziland, Lesotho, Mauritius or Zimbabwe) (or, if she resides within metropolitan Cape Town, lives in Nyanga East or Khayelitsha) and is receiving UCT-administered financial assistance of between R5 000 and R14 999.

[Refer to Appendix VIIc for further details.]

5.1.6.4 Objective 4 (number of consultations)

Profile of the typical UCT-SHS-MHS attendee requiring the greatest (mean) number of consultations according to selected demographic, academic, residential (home address) and financial assistance variables from 1991 to 1993:

The typical UCT-SHS-MHS attendee requiring the greatest (mean) number of consultations is a greater than or equal to 25 year old English first language speaking Coloured male (or Sotho speaking Black female) who is a second year undergraduate (or postgraduate) Fine Art and Architecture student who resides in an African or non-African country outside South Africa (or, if he/she resides within metropolitan Cape Town, lives in Nyanga East or Langa) and is receiving UCT-administered financial assistance.

[Refer to Appendix VIId for further details.]

5.2 MULTIVARIATE RELATIONSHIPS

This section will investigate the relationship existing between the nine selected demographic, academic, residential (home address) and financial assistance variables employed in this study and presentation with psychological or psychiatric complaints at the UCT-SHS-MHS. (This total rises to thirteen variables if the major subcategories of race/population group and residence (home address) are included in the model). Separate models are devised for Objective 2 (patients versus controls) and Objective 3 (patients versus the total student community), which constitute the two analytical objectives in the UCT-SHS study. On the other hand, no models are provided for Objective 1 (attendees) and Objective 4 (number of consultations) as they are mainly descriptive in nature. The statistical technique employed for the multivariate modelling is logistic regression analysis (refer to section 4.6.2.3 for further details).

The first subsection documents the models developed for the patient-specific data while the second subsection details the most important clinical/diagnostic-specific findings (labelled as "Specific findings"). The series of models developed for selected diagnoses recorded by psychologists, psychiatrist and, where appropriate, medical officers for students presenting at the UCT-SHS-MHS are reported in Appendix VIII.

5.2.1 Patient-specific data

5.2.1.1 Objective 2 (patients versus controls)

Table 5.190 demonstrates that, in the logistic regression analysis, the demographic variables of gender (female students) and language (English first language speaking students), the academic variable of faculty (Arts, Music and Social Science and Humanities faculty students) and the residence (home address) subcategory of students who reside within metropolitan Cape Town record a statistically significant ($p<0,05$) association with UCT-SHS-MHS attendance versus UCT-SHS attendance without UCT-SHS-MHS attendance. These variables, according to the classification appearing in sections 4.3.1, 4.3.2 and 4.3.3 and 4.3.4, constitute one "immutable factor" (gender), two "relatively immutable factors" (language and residence (home address)) and one "mutable factor" (faculty).

Table 5.190 Logistic regression analysis for UCT-SHS-MHS attendance versus UCT-SHS attendance without UCT-SHS-MHS attendance for all major diagnostic categories.

Variable and subcategory	SE	Adjusted OR (with 95% CI)	Df	χ^2	p
Intercept	0,388	-	1	26,3	$0,000^{Sig}$
Gender	0,089	1,7 (1,4 – 2,0)	1	35,0	$0,000^{Sig}$
Race/population group[1]					
Africans	0,252	0,9 (0,5 – 1,4)	1	0,3	$0,614^{NS}$
Coloureds	0,262	0,9 (0,5 – 1,5)	1	0,2	$0,684^{NS}$
Whites	0,235	0,8 (0,5 – 1,2)	1	1,3	$0,258^{NS}$
Age	0,012	2,5 (0,8 – 7,3)	1	2,7	$0,103^{NS}$
Language	0,095	1,2 (1,0 – 1,5)	1	5,3	$0,022^{Sig}$
Faculty	0,091	1,4 (1,2 – 1,7)	1	16,0	$0,000^{Sig}$
Level of study	0,188	1,1 (0,7 – 1,5)	1	0,1	$0,746^{NS}$
Year of study	0,116	1,0 (0,8 – 1,2)	1	0,2	$0,688^{NS}$
Residence (home address)					
mCT[2]	0,157	2,3 (1,7 – 3,1)	1	27,8	$0,000^{Sig}$
WCHR[3]	0,283	1,0 (0,6 – 1,7)	1	0,0	$0,887^{NS}$
SA[4]	0,153	1,2 (0,9 – 1,6)	1	1,5	$0,221^{NS}$
Financial assistance	0,112	1,1 (0,9 – 1,4)	1	0,7	$0,406^{NS}$
Total	-	-	13	158,8	$0,000^{Sig}$

Maximum likelihood = 1579,10.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
[2]Within metropolitan Cape Town.
[3]Outside metropolitan Cape Town but within WCHR.
[4]Outside metropolitan Cape Town and outside WCHR but within South Africa.

5.2.1.2 Objective 3 (patients versus the total student community)

Table 5.191 demonstrates that, in the logistic regression analysis, the demographic variable of gender (female students), the academic variables of faculty (Arts, Music and Social Science and Humanities faculty students), level of study (undergraduate students) and year of study (first year (freshman/fresher) students), the residence (home address) subcategory of students who reside within metropolitan Cape Town and the financial assistance variable (students receiving UCT-administered financial assistance) record a statistically significant ($p<0,05$) association with UCT-SHS-MHS attendance versus registration at the University of Cape Town without UCT-SHS-MHS attendance. These variables, according to the classification appearing in sections 4.3.1, 4.3.2 and 4.3.3 and 4.3.4, constitute one "immutable factor" (gender), two "relatively immutable factors" (residence (home address) and financial assistance) and three "mutable factors" (faculty, level of study and year of study).

Table 5.191 Logistic regression analysis for UCT-SHS-MHS attendance versus UCT-registration without UCT-SHS-MHS attendance for all major diagnostic categories.

Variable and subcategory	SE	Adjusted OR (with 95% CI)	Df	χ^2	p
Intercept	0,300	-	1	161,2	$0,000^{Sig}$
Gender	0,075	1,9 (1,6 – 2,2)	1	68,5	$0,000^{Sig}$
Race/population group[1]					
Africans	0,207	1,4 (0,9 – 2,1)	1	2,7	$0,100^{NS}$
Coloureds	0,206	0,9 (0,6 – 1,4)	1	0,1	$0,739^{NS}$
Whites	0,188	1,1 (0,7 – 1,6)	1	0,2	$0,677^{NS}$
Age	0,007	1,3 (0,4 – 4,4)	1	0,2	$0,621^{NS}$
Language	0,803	1,1 (0,9 – 1,3)	1	0,8	$0,366^{NS}$
Faculty	0,075	1,7 (1,5 – 2,0)	1	56,6	$0,000^{Sig}$
Level of study	0,144	1,8 (1,4 – 2,4)	1	17,7	$0,000^{Sig}$
Year of study	0,087	1,7 (1,4 – 2,0)	1	45,3	$0,000^{Sig}$
Residence (home address)					
mCT[2]	0,134	0,7 (0,6 – 1,0)	1	4,9	$0,026^{Sig}$
WCHR[3]	0,246	0,7 (0,4 – 1,1)	1	3,0	$0,083^{NS}$
SA[4]	0,137	1,2 (0,9 – 1,5)	1	1,3	$0,254^{NS}$
Financial assistance	0,193	2,2 (1,9 – 2,7)	1	75,1	$0,000^{Sig}$
Total	-	-	13	464,0	$0,000^{Sig}$

Maximum likelihood = 3230,36.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
[2]Within metropolitan Cape Town.
[3]Outside metropolitan Cape Town but within WCHR.
[4]Outside metropolitan Cape Town and outside WCHR but within South Africa.

5.2.2 Clinical/diagnostic-specific data

This subsection consists of a selection of the most important findings (labelled here as "Specific findings") documented in the clinical/diagnostic-specific results detailed in Appendix VIIIa (major diagnostic categories) and Appendix VIIIb (individual V-codes). These findings are classified according to the individual demographic, academic, residential (home address) and financial assistance variables that record an altered level of statistical significance (either newly statistically significant or no longer statistically significant) to that reported in the previous subsection for the patient-specific data. The candidate recognises that the choice of which findings to include and which results to exclude from this subsection is somewhat subjective. Nevertheless, the following conventions have been adopted with respect to the findings relating to the individual diagnoses outlined in Appendix VIII:

- For major diagnostic categories
  - "Other" disorders, which are composed of a disparate collection of separate and often unrelated disorders, have not been included here as they do not readily permit definitive commentary concerning possible reasons for their deviation from the model developed for the patient-specific data.

This elimination process leaves affective disorder, adjustment disorder, V-codes and anxiety (neurotic) disorder.

- For individual V-codes
  - Academic problem, complicated bereavement and pre- and post-termination counselling for unplanned/unwanted pregnancy were not considered for inclusion here due to their comparatively low number of presentations (20, 26 and 28 cases, respectively) at the UCT-SHS-MHS.

This second elimination process leaves relationship problem and family problem.

Due to these two elective decisions aimed at reducing the number of results to be highlighted in this subsection and further discussed in section 6.2.7, 23 objective-specific findings (in the form of 12 "Specific findings") have been chosen out of a possible 57 such results. They are detailed below.

5.2.2.1 Affective disorder

(a) Objective 2 (patients versus controls)

Specific finding #1

The relationships between all the selected variables and presentation at the UCT-SHS-MHS are maintained.

(b) Objective 3 (patients versus the total student community)

Specific finding #2

The relationships between all the selected variables and presentation at the UCT-SHS-MHS are maintained.

5.2.2.2 Adjustment disorder

(a) Objective 2 (patients versus controls)

Specific finding #3

The relationship between language (English first language speaking students) and presentation at the UCT-SHS-MHS is no longer statistically significant.

(b) Objective 3 (patients versus the total student community)

Specific finding #4

The relationships between level of study (undergraduate students) and students resident in metropolitan Cape Town and presentation at the UCT-SHS-MHS are no longer statistically significant.

5.2.2.3 V-codes

(a) Objective 2 (patients versus controls)

Specific finding #5

The relationships between language (English first language speaking students) and faculty (Arts, Music and Social Science and Humanities faculty students) and presentation at the UCT-SHS-MHS are no longer statistically significant.

(b) Objective 3 (patients versus the total student community)

Specific finding #6

The relationships between level of study (undergraduate students), year of study (first year (freshman/ fresher) students) and students resident in metropolitan Cape Town and presentation at the UCT-SHS-MHS are no longer statistically significant.

5.2.2.4 Anxiety (neurotic) disorder

(a) Objective 2 (patients versus controls)

Specific finding #7

The relationships between gender (female students) and language (English first language speaking students) and presentation at the UCT-SHS-MHS are no longer statistically significant while, on the other hand, the relationship between White students and presentation at the UCT-SHS-MHS is now statistically significant.

(b) Objective 3 (patients versus the total student community)

Specific finding #8

The relationship between students resident in metropolitan Cape Town and presentation at the UCT-SHS-MHS is no longer statistically significant while, on the other hand, the relationships between Coloured students and White students and presentation at the UCT-SHS-MHS are now statistically significant.

5.2.2.5 Relationship problem

(a) Objective 2 (patients versus controls)

Specific finding #9

The relationship between language (English first language speaking students) and presentation at the UCT-SHS-MHS is no longer statistically significant.

(b) Objective 3 (patients versus the total student community)

Specific finding #10

The relationships between level of study (undergraduate students), year of study (first year (freshman/ fresher) students and students resident in metropolitan Cape Town and presentation at the UCT-SHS-MHS are no longer statistically significant.

5.2.2.6 Family problem

(a) Objective 2 (patients versus controls)

Specific finding #11

The relationships between language (English first language speaking students) and faculty (Arts, Music and Social Science and Humanities faculty students) and presentation at the UCT-SHS-MHS are no longer statistically significant.

(b) Objective 3 (patients versus the total student community)

Specific finding #12

The relationships between faculty (Arts, Music and Social Science and Humanities faculty students), level of study (undergraduate students) and students resident in metropolitan Cape Town and presentation at the UCT-SHS-MHS are no longer statistically significant.

Chapter 6

DISCUSSION

This chapter is divided into five sections. The first section, which follows an introduction highlighting scientific concepts (coherence, plausibility, confounding, incoherence and synergism) that are highly relevant to the interpretation of results obtained from the data analysed in the UCT-SHS study, details selected methodological aspects – in the form of strengths, constraints and limitations and ethical considerations – relevant to the conduct of the UCT-SHS study. This section concludes with a model demonstrating the spectrum of medical informatics that is highly relevant insofar as this research employs medical informatics as the data source. The second section relates to overall student attendees and the selected demographic, academic, residential (home address), financial assistance and clinical variables employed in this research. It functions to link section 3.3 of the Literature Review – which documents student mental health service attendees (Objective 1-specific data), student mental health service usage/utilisation (prevalence) rates (Objective 3-specific data) and the mean number of consultations required by student mental health service attendees (Objective 4-specific data) – to the corresponding UCT-SHS-MHS attendee-specific results detailed in Chapter 5. Reasons are sought to explain why the stated Research Hypotheses, formulated in the Literature Review, are either confirmed or rejected by these objective- and variable-specific results. The third section outlines the utility of this research by initially detailing specific utilisation-orientated criteria (modified from Power, 1991), related to both the successful design of a public health research project and the effective implementation of recommendations derived from the results of such projects, that have been considered – allowing for the constraints and limitations documented in the first section – during the design phase of this study. The potential beneficiaries, including student service-orientated facilities, are listed together with brief details as to the nature of the benefit. The fourth section catalogues a fairly comprehensive list of specific recommendations for not only the UCT-SHS (and the UCT-SHS-MHS) but also the Student Development and Services Department (UCT-SDSD), the Student Advice and Development Centre (UCT-SADC), the Undergraduate Financial Aid Office (UCT-UFAO), the Student Housing Office (UCT-SHO) and the Academic Development Programme (UCT-ADP) as these student service-orientated departments have an important role to play in the reduction of the prevalence and severity of mental disorders in the student community. The fifth section, which functions as a summary, contains a series of photographs illustrating some of the highlights in the careers of students attending the University of Cape Town – from registration to graduation – as well as some concluding comments.

6.1 METHODOLOGICAL ASPECTS

The following scientific concepts are not only important to the general practice of epidemiology but are also highly relevant to the interpretation of results obtained from the data analysed in the UCT-SHS study:

– Coherence

> *Coherence supports pre-existing inference and theory [about the relationship between disease and the causal factor under study]*
>
> (Susser, 1973: p. 154)

In the UCT-SHS study, disease (outcome) is defined as attendance at the UCT-SHS-MHS from 1 January 1991 to 31 December 1993, whereas the causal factor/s (exposure) comprise the selected demographic, academic, residential (home address) and financial assistance variables employed to characterise students presenting at the UCT-SHS-MHS with psychological or psychiatric complaints requiring evaluation and/or therapeutic intervention. In the abridged and highly abridged (for age and residence (home address) variables) formats these variables have been divided into two subcategories which have been employed to create a series of nine Research Hypotheses. These Research Hypotheses and their corresponding Null Hypotheses (refer to section 4.3 for further details) are based on either the personal observations of the candidate during his three year association with the UCT-SHS and/or the findings of student mental health care professionals detailed in the Literature Review. Therefore any finding that confirms a stated Research Hypothesis is coherent with pre-existing inference and theory concerning the relationship between the student characteristic detailed in the selected variable and the need to attend the UCT-SHS-MHS.

– Plausibility

> *Plausibility refers to the observed association being biologically understandable on the basis of current knowledge concerning its likely mechanisms. The consideration of plausibility is useful, particularly as it may indicate biases or confounding factors which should be considered.*
>
> (Elwood, 1998: p. 177)

It is important that interpretation of research findings relating to the characteristics of students receiving mental health services at the University of Cape Town must be appropriate to the circumstances affecting either the total UCT student community or its individual subgroups under investigation. It is feasible that circumstances relating to students – especially historically disadvantaged and educationally underprepared students – attending UCT may be appreciably different to those studying at tertiary educational institutions in developed (first world) countries. These differences must be highlighted when specific recommendations are proposed (refer to section 6.4 for further details) – otherwise relevant University authorities may not be able to implement appropriate remedial and interventive preventive programmes to rectify problem areas identified in this study.

– Confounding

> *Confounding may be defined as a distortion of an exposure-outcome association brought about by the association of another [extraneous] factor with both outcome and exposure ... In practice, many potential confounders will not in fact be confounding, in that their association with outcome and exposure in the study data are often weak and unimportant.*
>
> (Elwood, 1988: p. 85)

It is possible that other factors outside of the nine selected demographic, academic, residential (home address) and financial assistance variables employed to characterise students attending the UCT-SHS-MHS may contribute to various findings highlighted in the results. Socio-economic status – including personal and family income – is an important indicator that, according to the Literature Review, might appreciably affect the mental health status of students attending tertiary educational institutions (i.e. low socio-economic status associated with severe financial problems has been documented as contributing to the development of mental disorders in students). This indicator, due to its non-availability in official University records, could not be directly investigated in this research work with the result that financial assistance status and value was employed as a proxy measure. It was also not possible, for the same reasons, to assess other social and family factors which may materially contribute to the student's mental health status. Therefore the selected variables employed in this study by no means constitute a comprehensive set of possible causative factors contributing to student attendance at the UCT-SHS-MHS.

– Incoherence

> *Incoherence generates new theory. If some facts appear to conflict with the hypothesized cause, another explanation must be found for the facts; or another explanation can be tested in further studies; or the inconsistency can be filed until some better explanation is developed.*
>
> (Susser, 1973: p. 154)

Any finding that rejects a stated Research Hypothesis is incoherent with pre-existing inference and theory concerning the relationship between the student characteristic detailed in the selected variable and the need to attend the UCT-SHS-MHS. This result would be in conflict with either the personal observations of the candidate during his three year association with the UCT-SHS and/or the findings of student mental health care professionals detailed in the Literature Review. Therefore an alternative hypothesis and explanation, appropriate to the circumstances affecting either the total UCT student community or its individual subgroups under investigation, must be formulated. Furthermore, the Discussion chapter contains a subsection outlining further research opportunities which could investigate, inter alia, any findings that may appear to conflict with the stated Research Hypotheses and/or contradict circumstances that are believed to influence the mental health status of either the total UCT student community or its individual subgroups under investigation.

– Synergism

> *As a public health concept, synergism refers to the situation in which the joint exposure of two or more factors results in a risk of disease that exceeds that expected from the sum of the separate factors. In this sense, synergism is a particular type of interaction, one based on departures from a model in which excess relative risks [odds ratios] are additive.*
>
> (Schlesselman, 1982: p. 67)

There are several variables employed in this study to characterise students attending the UCT-SHS-MHS for the evaluation and/or therapeutic intervention of psychological or psychiatric complaints. It is feasible that there is a degree of synergism between two or more of these variables and the development of mental disorders presenting at the UCT-SHS-MHS. There is a definite relationship between the following variable subcategories: (i) being an African student (race/population group); (ii) being a non-English first language speaking student (language), and (iii) being eligible for and receiving UCT-administered financial aid (financial assistance) as well as, possibly, (iv) being greater than or equal to 25 years of age (i.e. a non-traditional aged undergraduate student) (age). Multivariate modelling (refer to section 5.2) will determine whether there is a synergistic interaction between these related variables referring to historically disadvantaged and educationally underprepared Black students attending the University of Cape Town.

This section is divided into four subsections. The first subsection documents the methodological strengths of the study. These include the generation of new findings to complement the existing college/university mental health services literature by, inter alia, the use of a series of medical controls in order to compare the demographic, academic, residential (home address) and financial assistance characteristics of these two samples. The second subsection details the corresponding methodological constraints and limitations affecting this research. These include possible factors relating to the completeness and accuracy of UCT-SHS-MHS records as well as the potential contamination of patients and controls. Possibly the major limitation of this study relates to the generalisability of the UCT-SHS "Patients Stat Details Sheet" data employed for data collection to community-based student disease patterns. Extensive reference is made to the model proposed by Goldberg and Huxley (1980) which outlines a series of filters through which students affected by a mental disorder have to pass before they are seen by a mental health care professional. Various factors are listed and interpreted in the light of this model. The third subsection outlines some ethical considerations that are relevant to this study in terms of the "Georgetown Mantra" which consists of the four principles of justice, autonomy, beneficence and non-malevolence. It is meaningful to note that the principles of autonomy and non-malevolence can be applied to the important topic of patient confidentiality. Details are provided concerning methodological steps taken to protect the identity of student attendees at the UCT-SHS-MHS during the study period of 1991 to 1993. The fourth subsection discusses the structure (methodological aspects) and function (utilisable aspects) of this study in terms of a model presented by Power (1991) demonstrating the spectrum of medical informatics. This material not only provides a useful summary to this section but is also highly relevant insofar as this research employs medical informatics (albeit in a non-digital form) as the data source.

6.1.1 Strengths

6.1.1.1 New findings to complement existing college/university mental health services research literature

(a) Broad-ranged description of patient sample (Objective 1-specific data)

The UCT-SHS study employs a broad range of selected demographic (gender, race/population group, race/population group and gender combined, age and language), academic (faculty, level of study and year of study), residential (home address) and financial assistance variables to describe students presenting at the UCT-SHS-MHS. None of the studies reported in the Literature Review provide such comprehensive details – for example, Boor, 1975; Braaten and Darling, 1961; Dunn et al., 1980, and Sharp and Marra, 1971, are the only studies to include all three academic variables listed above but, however, do not contain many of the other selected variables. Although some studies (e.g. Braaten and Darling, 1961) do supply details not included in the UCT-SHS study, no study recorded either language or financial assistance-specific findings. Therefore, these findings appear to be unique in college/university mental health service research.

(b) Controls to analyse differences between UCT-SHS-MHS attendees and UCT-SHS attendees (Objective 2-specific data)

The UCT-SHS study employs venue and date-specific controls consisting of students presenting at the UCT-SHS who do NOT present at the UCT-SHS-MHS during the study period of 1 January 1991 to 31 December 1993. This is a notable extension to all the other studies presented in the Literature Review although German and Arya (1969) do make limited use of such controls. However, these authors do not employ the range of selected demographic, academic, residential (home address) and financial assistance variables that the UCT-SHS study does.

(c) Controls to analyse differences between UCT-SHS-MHS attendees and students registered at the University of Cape Town (Objective 3-specific data)

The UCT-SHS study, again unlike the majority of studies reported in the Literature Review, employs the total student community who do NOT present at the UCT-SHS-MHS during the study period as a venue-independent set of controls. This strategy has enabled a unique series of unadjusted and, where appropriate, adjusted odds ratios (ORs) to be calculated for selected demographic, academic, residential (home address) and financial assistance variables (refer above) in addition to the ubiquitously reported usage/utilisation rates per 1 000 students. However, no other study has come close to documenting such a detailed and categorical description of attendee usage/utilisation rates.

(d) Broad-ranged description of consultation details (Objective 4-specific data)

The UCT-SHS study employs the above selected demographic, academic, residential (home address) and financial assistance variables to document both the total and the mean number of consultations required by students attending the UCT-SHS-MHS. Only a few studies report the mean number of consultations for overall attendees, gender or race/population group so that the findings documented in the UCT-SHS study would, also, appear to be unique in college/university mental health service research.

(e) Detailed and categorical description of clinical data (Objective 1 and Objective 3-specific data)

The UCT-SHS study not only documents patient-specific data according to selected demographic, academic, residential (home address) and financial assistance variables (refer above) but also details the five major diagnostic categories (affective disorder, adjustment disorder, V-codes, anxiety (neurotic) disorder and "other" disorders) according to the abridged format of these variables. No other study reported in the Literature Review has attempted to present this data.

6.1.2 Constraints and Limitations

> *The term bias refers to any systemic error in the design, conduct or analysis of a study that results in a mistaken estimate of an exposure's effect on the risk of disease.*
>
> (Schlesselman, 1982: p. 124)

and

> *Any process at any stage of inference which tends to produce results or conclusions that differ systematically from the truth.*
>
> (Sackett, 1979: p. 51 – adapted from Murphy, 1976)

These two definitions introduce an epidemiological term that is extremely relevant to the consideration of potential constraints and limitations affecting the UCT-SHS study.

> *The external validity of a study refers to the way in which the results of the study can be generalised to a wider population.*
>
> (Elwood, 1988: p. 42)

This definition outlines a further epidemiological term that is extremely relevant to the limitations in the interpretation of UCT-SHS data detailed in subsection 6.1.2.

This section of the Discussion chapter is divided into two subsections. The first subsection details possible constraints to the completeness and accuracy of UCT-SHS-MHS psychologist, psychiatrist and (where appropriate) medical officer data – some of which would also be of relevance to the control-specific data –

together with strategies adopted by either UCT-SHS management or the candidate himself, to reduce their impact on the accuracy/(internal) validity of UCT-SHS records and the research-specific results obtained from using them. The second subsection documents possible limitations to the transposition of UCT-SHS-MHS attendee-specific results to the total UCT student community by highlighting the role of psychologically impaired student non-attendees who might affect the representivity of the patient sample and, thereby, impact on the accuracy/(external) validity of the results obtained.

It must be noted that these potential constraints and limitations relate to the clinical data obtained from the UCT-SHS-MHS and do not necessarily apply to the demographic, academic, residential (home address) and financial assistance-specific data obtained from the UCT Central Admissions Office (SAS Committee) and the UCT-UFAO (Undergraduate Financial Aid Office). This material, on the other hand, is subject to the usual constraints affecting all major data sources – completeness of sample for students registered at the University of Cape Town during 1991, 1992 and 1993, and accuracy of individual entries for selected demographic, academic, residential (home address) and financial assistance variables. These factors, which are not unique to this study, will not be discussed further in this section as they did not appear to present a major problem to the quality of this data set.

6.1.2.1 Constraints with UCT-SHS data capture

It must be noted that the UCT-SHS study is a retrospective rather than a prospective study which accounts for several of the constraints outlined below. This research achieves its stated objectives by utilising an existing data source (the "Patients Stat Details Sheet" completed by the resident psychologists, psychiatrist and medical officers at the UCT-SHS-MHS) rather than by developing and subsequently employing a standardised prospective screening instrument.

(a) Completeness of records of UCT-SHS-MHS psychological and psychiatric consultations

It is feasible that not all students presenting at the UCT-SHS-MHS for evaluation and/or therapeutic intervention will have had their names and/or details recorded on the "Patients Stat Details Sheet" compiled by the resident psychologists, psychiatrist and medical officers. In an attempt to counter this problem, both the erstwhile Director (Dr W.P. Orr) and the current Director (Dr K.J. Gough) have repeatedly emphasised the importance for all categories of UCT-SHS professional staff to maintain accurate and complete attendance records. However, students presenting to medical officers with various physical symptoms may have underlying psychological or psychiatric complaints related to their primary presenting complaint which may not always be recognised as contributory factors. Even if these mental disorders are acknowledged by the patient and reported by the medical officer in the patient's notes they may not, for various reasons – including medical officer reticence to propose and/or patient unwillingness to accept such a diagnostic label, always be recorded on the "Patients Stat Details Sheet". In addition, consultations conducted by nursing staff are not included in the data source employed to obtain results for the UCT-SHS study, although the more

severe complaints would invariably be referred to resident psychologists or medical officers for further evaluation and/or therapeutic intervention.

The major benefit of the UCT-SHS "Patients Stat Details Sheet" is that the data comes from a single well-defined source unlike the data for notifiable diseases which derive from many different centres. Nevertheless, notification data, although beset by considerably greater constraints and limitations to those affecting this study, are published, widely quoted and used as a basis on which to formulate health policies.

(b) Accuracy of coding of UCT-SHS-MHS psychological and psychiatric consultations

It is important to note that the data source employed to obtain results for the UCT-SHS study (viz. the "Patients Stat Details Sheet") relies solely on the validity of the clinical diagnoses made by the resident psychologists, psychiatrist and medical officers. There is no clinical backup in the form of a validated structured instrument to further enhance the accuracy of diagnoses made in order to reduce the element of clinical error. There are several factors that could potentially influence the clinical accuracy and, therefore, the validity of this data:

- **Category I: Incorrect clinical diagnoses made by psychologists, psychiatrist and medical officers**

  It is possible that the resident psychologists, psychiatrist and medical officers may have made an occasionally incorrect clinical assessment. This risk would be highest for the initial consultation from which the clinical/diagnostic-specific data appearing in Chapter 5 was obtained. However, an ameliorating factor is that the UCT-SHS enjoys a comparatively low turnover of staff so that the majority of these professionally trained staff have been able to develop considerable experience in the specialised field of evaluating and treating student mental health problems.

- **Category II: Interpersonal variation in coding between psychologists, psychiatrist and medical officers**

  It is conceivable that in the presence of separate codes for various closely related mental disorders (especially affective disorders), there may be a degree of subjective interpersonal variation between codes recorded on the "Patients Stat Details Sheet" by different professional staff. However, an ameliorating factor is that a uniform diagnostic coding system modified from the DSM IIIR (American Psychiatric Association – APA, 1987) was introduced in the UCT-SHS-MHS to substantially reduce this possibility.

- **Category III: Legibility of handwriting of psychologists, psychiatrist and medical officers**

  There is a remote possibility that certain psychological or psychiatric diagnoses have been miscoded during the transfer of student details from the "Patients Stat Details Sheet" due to the incorrect interpretation of the semi-legible handwriting of certain psychologists and medical officers. In an attempt

to counter such a possibility, both the erstwhile Director (Dr W.P. Orr) and the current Director (Dr K.J. Gough) have repeatedly highlighted the importance for all categories of UCT-SHS professional staff to maintain neat and decipherable attendance records.

- **Category IV: Erroneous coding by psychologists, psychiatrist and medical officers**

It is possible that certain psychological or psychiatric diagnoses have been miscoded by resident psychologists, psychiatrist and medical officers during the completion of "Patients Stat Details Sheet" (e.g. PD – which could be misinterpreted for the codes PO (other disorder) or PP (psychosis) – instead of PPD for personality disorder). In an attempt to overcome this problem the candidate has cross-referenced all individual entries on psychologist, psychiatrist and medical officer "Patients Stat Details Sheets" which display obviously erroneous coding details (e.g. PD instead of PPD) as well as incomplete coding details to the appropriate date-specific entries in the patient's clinical notes.

(c) Ability to maintain separation (viz. avoid "contamination") of patients and controls

Note: Patients are defined as UCT-SHS-MHS attendees from 1 January 1991 to 31 December 1993 while controls are defined as students presenting at the UCT-SHS with purely physical complaints who do NOT attend the UCT-SHS-MHS during the study period.

- **Category I: During the study period**

It is conceivable that some controls may have sought evaluation and/or therapeutic intervention from the UCT-SHS-MHS during the study period (viz. 1 January 1991 to 31 December 1993). Although there are no enabling factors to correct for missing patients (due to incomplete records) who may have erroneously been classified as controls, computerised data manipulation based on the cumulative-incidence case-control study model has been employed to prevent the "contamination" of controls. In this model, controls are sampled from persons (students) who at the end of the study period have not developed the disease (attendance at the UCT-SHS-MHS) and, therefore, are no longer at risk of becoming cases (Kelsey, Thompson and Evans, 1986). It has, consequently, been possible to delete date-matched UCT-SHS medical patients who also presented at the UCT-SHS-MHS from 1 January 1991 to 31 December 1993 (invalid controls) from the final (definitive) list of controls.

- **Category II: Before and after the study period**

It is possible that some controls may have sought evaluation and/or therapeutic intervention at the UCT-SHS-MHS either before the commencement of the study period (viz. before 1 January 1991) or after the completion of the study period (viz. after 31 December 1993). Therefore, the computerised data manipulation outlined above only partially fulfils the criteria for a cumulative-incidence case-control study insofar as it cannot be assumed that controls are no longer at risk of attending the UCT-SHS-MHS

post December 1993. A possible solution to this problem would have been to extend the UCT-SHS study to include UCT-SHS-MHS attendees from 1990 to 1994. However, the variable quality (completeness) of UCT-SHS-MHS records before 1991 is a major constraining factor to investigating whether controls were UCT-SHS-MHS attendees prior to the study period while 1994 records were not readily available at the time of initial data collection and collation.

6.1.2.2 Limitations with interpretations of UCT-SHS data

(a) Generalisability of UCT-SHS "Patients Stat Details Sheet" data to community-based student disease patterns

Rifkin, Muller and Bichmann (1988), quoted by Mathews (1992), state that a community can be defined: (i) in geographic terms; (ii) in terms of a group of people sharing the same basic interests, and (iii) epidemiologically as a "target" or "at risk" group. Similarly, Katzenellenbogen (1990) states that a population may be defined: (i) spatially (for example, inhabitants of a village, region or country); (ii) temporally, or (iii) by virtue of membership of a specific social, familial, professional or other group. Students attending the University of Cape Town represent the community/population in which this study is undertaken (also refer to section 4.2.3 for further details). These students, by definition, can be considered to occupy a distinct position in society as well as share the same basic interest of academic scholarship. However, they derive from a greater population that is not spatially defined insofar as an appreciable proportion of the student body reside outside the borders of South Africa – in fact, although the University of Cape Town is physically located within the boundaries of metropolitan Cape Town, more than half of the students attending it reside outside the boundaries of metropolitan Cape Town. The epidemiological definition of a community, in terms of an "at risk" group (Rifkin, Muller and Bichmann, 1988) can be explained here by the concept that all students are potentially at risk of developing mental disorders due to the inherent stress associated with university life. The aim of the UCT-SHS study is to characterise particular subsets within the total student community who present at the UCT-SHS-MHS with such complaints.

Goldberg and Huxley (1980) present a model consisting of five different levels and four filters potentially encountered by a patient in the "pathway to psychiatric care" that is extremely relevant to the interpretation of UCT-SHS study results. In this model, level 1 refers to all mental disorders existing in the community (viz. conspicuous psychiatric morbidity). In the UCT-SHS study the total community corresponds to the UCT student body which forms the population base for this research work. Therefore the remaining levels and filters outlined below in Figure 6.1 are accordingly adapted to reflect a situation where the UCT-SHS replaces general practice. A proportion of these students will pass through filter 1 to level 2 by deciding to seek evaluation and/or therapeutic intervention at either the UCT-SHS or an alternative healthcare facility. Level 2 consists of all students affected by psychological or psychiatric morbidity that present to residential medical officers at either the UCT-SHS or general practitioners at an alternative healthcare facility. These students often present with physical complaints instead of the underlying mental disorder so that a proportion of these patients will not pass through filter 2 because the underlying psychological or psychiatric complaint

will not be recognised by the medical officer or general practitioner ("hidden psychiatric morbidity"). Level 3 consists of all mental disorders detected by the medical officer or general practitioner ("conspicuous psychiatric morbidity"). A proportion of these students will pass through filter 3 to level 4 by being referred to either the resident psychologists or psychiatrist at the UCT-SHS-MHS or other mental health professionals at alternative healthcare facilities for specialised evaluation and/or therapeutic intervention. (This pathway is occasionally bypassed at the UCT-SHS when a student chooses the route of self-referral to a resident psychologist, viz. the patient advances from level 1 to level 4 without encountering either levels 2 and 3 or filters 1 and 2). Very infrequently, a student will pass through filter 4 to level 5 by requiring in-patient hospitalisation at either Groote Schuur or Valkenberg Hospitals or an alternative private in-patient healthcare facility. Therefore, a very substantial proportion of students who suffer from episodes of mental illness will not come into contact with health services at all, or, if they do, they will not be perceived to be suffering from mental illness (Katzenellenbogen, Joubert and Abdool Karim, 1997). Table 6.1 complements this material by detailing a research question appropriate to the UCT-SHS study for each level and filter (except Level 5 which is not relevant here) of the model presented by Goldberg and Huxley (1980). This exercise not only provides a practical demonstration of the relevance of this model to the research, but also illustrates the position and function of the UCT-SHS-MHS in the provision of health care to the local student community. It also highlights some of the limitations of this study by addressing questions that it is unable to answer directly.

Figure 6.1 Mental health service levels according to the model presented by Goldberg and Huxley (1980) (adapted from Flisher, Subedar and Fisher, 1999).

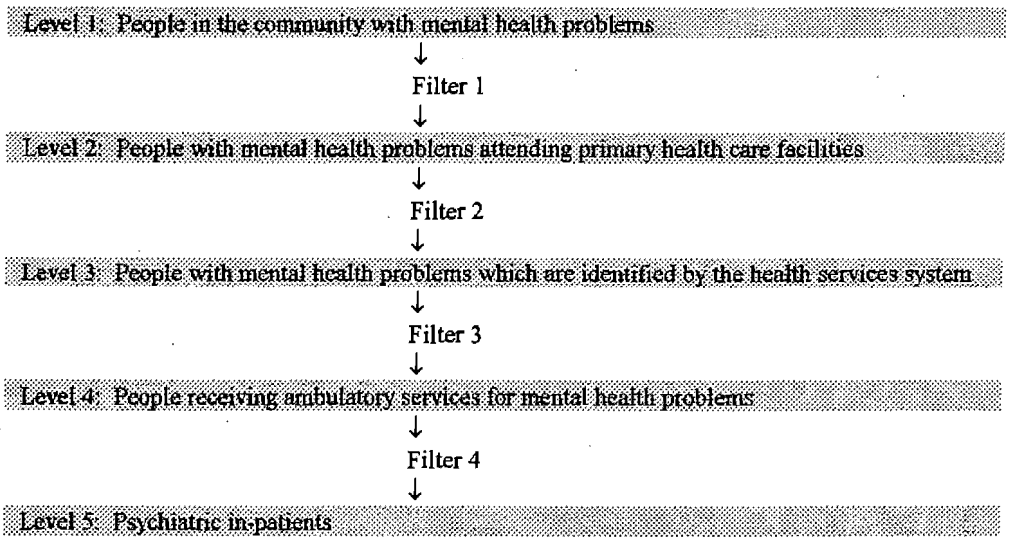


Table 6.1 Research questions associated with each level and filter of the model presented by Goldberg and Huxley (1980) (adapted from Katzenellenbogen, Joubert and Abdool Karim, 1977).

Level 1
How common are psychological or psychiatric complaints in the UCT student community?
Filter 1
What demographic, academic, residential (home address) and financial assistance factors (according to selected variables) lead students to either attend the UCT-SHS for treatment of a presenting (overlying) medical complaint or the UCT-SHS-MHS for evaluation and/or therapeutic intervention of psychological or psychiatric complaints?
Level 2
What proportion of students attending the UCT-SHS for physical complaints are affected by concomitant psychological or psychiatric complaints?
Filter 2
To what extent do UCT-SHS primary health care personnel (medical officers and nursing staff) detect underlying mental illness, and what are some of the factors affecting this detection pattern?
Level 3
What proportion of students attending the UCT-SHS are recognised by medical officers as being affected by concomitant psychological or psychiatric complaints?
Filter 3
What factors (apart from the detection of an underlying psychological or psychiatric complaint) contribute to medical officers' decisions to refer affected students to UCT-SHS-MHS psychologists or psychiatrist?
Level 4
What are the characteristics according to selected demographic, academic, residential (home address) and financial assistance variables of UCT-SHS-MHS attendees?
Filter 4
What factors play a role in determining whether UCT students are admitted to Groote Schuur Hospital (GSH) Psychiatric Casualty Department (Ward C23) or other psychiatric hospitals (e.g. Valkenberg Hospital)?
Level 5
Secondary and tertiary (in-patient) hospital facilities largely fall outside of the University (and its jurisdiction) so only the filter to this level of care is relevant (and of interest) to relevant University authorities.

UCT-SHS statistics collected manually from the "Patients Stat Details Sheet" (or stored in the Computerised Patient Record System) may be of limited value in determining the true prevalence of various mental disorders in the total student community because of bias – relating to the number of students affected by mental disorders who actually present at the UCT-SHS-MHS. However, in the current absence of more adequate (student community-based) data, an indication of the approximate magnitude and distribution of the problem posed by student mental disorders can be obtained from the UCT-SHS-MHS records. Since the incidence/prevalence and severity of a mental disorder in the student community could conceivably influence UCT-SHS-MHS attendances, this data does, therefore, provide a proxy measure of various on-campus mental disorders.

This study, therefore, does not claim to be able to report on the true incidence (or prevalence) or various mental disorders affecting the total student community. It does, instead, within the limitations outlined in this subheading, attempt to give an indication of the mental disorders which affect subsets of the total student community as measured by the number of psychological or psychiatric complaints presenting at the UCT-SHS-MHS for evaluation and/or therapeutic intervention. These findings should, however, despite these limitations, prove extremely valuable to relevant University authorities responsible for the implementation of various student-related operational planning initiatives.

The following categories which comprise most of the subsets of possible non-attendees at the UCT-SHS-MHS are also classified according to which of the four levels they occupy in the model presented by Goldberg and Huxley (1980).

- **Category I: Non-presenters**

  Naturally, not all students (especially historically disadvantaged Black students) who are suffering from various mental disorders would voluntarily present themselves at either the UCT-SHS-MHS or any other mental health facility for evaluation and/or therapeutic intervention. However, the more severe the disorder, the more likely are the affected students to seek assistance to alleviate their discomfort. This category corresponds to level 1 of the model presented by Goldberg and Huxley (1980).

- **Category II: Private practice**

  Notable non-attendees of the UCT-SHS-MHS would include the category of students that would be treated by private medical practitioners, psychologists or psychiatrists. The major users of these private health care facilities would be students generally deriving from a more privileged social background who are covered by their parents' medical aid schemes. These students would consequently be less likely to be included in the UCT-SHS study. There might, therefore, be a selective underrepresentation (systematic bias) of these predominantly White students in the patient sample. In addition, locally resident students whose home address is within metropolitan Cape Town, irrespective of medical aid status and, possibly, race/population group, might also be more likely to consult private practitioners who are already known to them and/or their families than out-of-town students. On the other hand, students receiving UCT-administered financial aid (most of whom are historically disadvantaged Black students) who are entitled to free health care at the UCT-SHS would, because of financial constraints, be less likely to seek treatment from the private health sector. Therefore, the majority of these historically disadvantaged Black students, who constitute a special interest group in this study, would not fall into this category so that the findings relating to this important student subset should remain representative of the total student community. This category corresponds to level 2 and, in most cases, level 3 of the model presented by Goldberg and Huxley (1980).

- **Category III: Groote Schuur Hospital Psychiatry Outpatients Department**

  Medical and paramedical students based at UCT Medical School, Observatory, might choose to seek attention from the adjacent Groote Schuur Hospital Psychiatry Outpatients Department (GSH Psych. OPD) rather than travel circa two kilometres to the more distant and, for them, less accessible UCT-SHS-MHS. In addition, students presenting at the UCT-SHS with obviously severe psychopathology characterised by violent and/or psychotic behaviour would be referred directly to the Casualty Department of this tertiary academic hospital for further specialised psychiatric assessment and possible short-term in-patient hospitalisation. There is also the likelihood that some students receiving treatment

at GSH for unrelated medical conditions may be assessed as requiring further evaluation and/or therapeutic intervention for possible mental disorders and thereby receive internal referrals to the GSH Psych OPD rather than the UCT-SHS-MHS. A possible solution to this problem would have been to extend the UCT-SHS study to include the GSH Psych. OPD and, possibly, GSH Casualty Department psychiatric diagnoses. This would have required a download of the names of all patients attending the former facility and a comprehensive record search of the latter from 1 January 1991 to 31 December 1993 which could be cross-referenced to the UCT Central Admissions Office computerised student records system for 1991, 1992 and 1993 registrations. This category corresponds to level 4 and, in some cases, level 5 of the model presented by Goldberg and Huxley (1980).

A possible future research-based solution to the problem of these non-attendees who render the UCT-SHS study unrepresentative of mental disorders affecting the total student community would be to conduct a prospective study. This study could consist of a standardised questionnaire attached to all student registration forms completed at the beginning of the academic year. The contents of this questionnaire could be related to adolescence risk-taking behaviour previously documented by researchers within the University of Cape Town Department of Psychiatry together with other documented University-specific problem areas.

The results of these questionnaires could be correlated according to the same selected demographic, academic, residential (home address) and financial assistance variables employed for the retrospective analysis of UCT-SHS-MHS consultations conducted in this dissertation. Therefore, this method of data analysis would permit direct comparison between these two separately acquired sets of data. Any differences would be noted and thoroughly explored as they could possibly highlight the characteristics of non-UCT-SHS-MHS attendees who are at risk of developing various mental disorders.

(b) Restricted focus of data collected and collated from "Patients Stat Details Sheet"

The UCT-SHS study is confined to selected demographic (gender, race/population group, race/population group and gender combined, age and language), academic (faculty, level of study and year of study), residential (home address), financial assistance and, where appropriate, clinical (diagnostic) variables, but does not attempt to address further socio-demographic factors relating, inter alia, to family structure or psychological factors relating, inter alia, to ego defence mechanisms. The candidate did initially consider these additional factors (refer to Appendix XIa for further details) but the lack of such comprehensive background family details in many of the patient notes precluded this option. A possible solution to this problem would be for prospective students to complete a fairly comprehensive standardised bibliographic data sheet prior to their initial consultation and for the resident therapists (psychologists and psychiatrist) to complete a standardised psychological diagnostic fact sheet (possibly linked to a validated instrument – refer to section 6.1.1.2) after the initial consultation which could, if necessary, be periodically updated. The availability, subject to strict ethical criteria, of this additional information would facilitate more holistic

research into factors related to the evolution and presentation of student mental disorders at the UCT-SHS-MHS.

(c) Restricted time period of data collected and collated from "Patients Stat Details Sheet"

The UCT-SHS study collected, collated and analysed data relating to patient attendances at the UCT-SHS-MHS during the time period 1 January 1991 to 31 December 1993, which coincided with the beginning of the transformation process at the University of Cape Town. Therefore, as previously mentioned in the Introduction chapter, the results of this study should be of considerable interest to relevant University authorities as they would, at least, partially mirror the consequences of a student community in a state of transition – a situation which would possibly lead to an increased incidence of, inter alia, adjustment disorders amongst those students vulnerable to these changes. However, the transformation process has continued apace since then, leading to a significant change in the composition of the total student community from that existing during the study period. Consequently, the client-specific profile of the UCT-SHS-MHS has probably also altered to reflect the new demographic profile of the University. Nevertheless, many of the trends detailed in the results of the UCT-SHS study (e.g. the high usage/utilisation rate for historically disadvantaged Black students) probably still prevail although it would be of considerable interest to assess whether these trends have been ameliorated (as reflected by a reduced usage/utilisation rate) or exacerbated (as reflected by an increased usage/utilisation rate) by the transformation process.

6.1.3 Ethical Considerations

This subsection functions as an extension to section 4.4.4 which initially raised some of the ethical issues – mainly regarding proof of confidentiality required by relevant University authorities prior to the release of student records – relating to the conduct of this study. In addition, this subsection can be viewed in the context of section 1.5 which details aspects, including the advantages (section 1.5.2) and the disadvantages (section 1.5.3), of race-based research. There can be little doubt that this particular topic, bearing in mind the recent history of institutionalised racial discrimination and exploitation that occurred in this country, would, in itself, constitute a major ethical dilemma – however, as this topic has been previously addressed in some detail, it will not be repeated here.

6.1.3.1 The "Georgetown Mantra"

This consists of four separate principles that can be applied to all aspects of medical and health practice and research. They are as follows: (i) justice; (ii) autonomy; (iii) beneficence, and (iv) non-malevolence (Beauchamp and Walters, 1989).

(a) Justice

Katzenellenbogen, Joubert and Abdool Karim (1997) state that this ethical principle, when applied to the field of epidemiological research, is usually interpreted to mean that the community being investigated is entitled to receive a fair distribution of the benefits accruing from the research undertaken. This would comply with the specific principle of distributive justice.

It has always been the intention of the candidate to share all the results obtained from this study with relevant University authorities who may be able to use them, together with a fairly comprehensive list of specific recommendations that arise out of them, to the direct benefit of the student community. This student community, although obviously not comprising those students registered at the University of Cape Town during the study period of 1991 to 1993, would nevertheless consist of not only the present student body but also prospective students who would wish to pursue a tertiary education at this institution. Therefore this research endeavours to meet the requirements of this ethical principle (refer to section 6.3.2 for further details concerning the range of potential benefits to be derived from it).

(b) Autonomy

Katzenellenbogen, Joubert and Abdool Karim (1997) note that this ethical principle relates to the notion that a competent individual has the right to self-determination which must be respected by both health and medical practitioners as well as researchers.

This research relates to the study of a series of predefined characteristics relating to a collection of patient-specific records rather than the conducting of (potentially) invasive procedures on a series of selected individual patients. Therefore, although desirable, it is not absolutely essential (and wholly impractical) to seek the individual informed consent of all former UCT-SHS-MHS attendees from 1991 to 1993 to use their records for the purpose of research. Instead, the responsibility of providing informed consent on the individual patient's behalf has been entrusted to the Director of the UCT-SHS whose duty it is to either grant or refuse permission for the prospective researcher to employ their records. This permission, which was granted to the candidate, is based upon considerations relating to, inter alia, the nature and strength of the proposed research as well as the ability of the researcher to ensure that the contents of these UCT-SHS records remain confidential.

(c) Beneficence

Katzenellenbogen, Joubert and Abdool Karim (1997) observe that this principle requires that the actions of health and medical researchers be directed at improving the well-being of patients or study participants.

In non-therapeutic (epidemiological) research, according to Beauchamp and Walters (1989), the research subject's interests are less at centre stage, because the positive benefit sought by the scientist is new

knowledge. Often (but not necessarily) this knowledge is desired because it is expected to contribute to the resolution of important medical or social problems. It is hoped that this research, which was initiated following the clinical observation by the candidate that historically disadvantaged (and educationally underprepared) Black students appeared to be more predisposed to certain mental disorders than their generally advantaged White peers, will provide new knowledge that will contribute to the enhancement of the tertiary educational experience of not only present but also future students attending the University of Cape Town.

(d) Non-malevolence

Katzenellenbogen, Joubert and Abdool Karim (1997) state that this principle requires that the actions of health and medical researchers should not cause harm to patients or study participants. The authors note that this principle is closely linked to that of beneficence (refer above).

No obvious sources of harm were identified that could prejudice the welfare of students who presented at the UCT-SHS-MHS from 1991 to 1993 for evaluation and/or therapeutic intervention of psychological or psychiatric complaints – especially as this retrospective records-based research involves no direct physical link to these UCT-SHS-MHS attendees. Every effort has been made to safeguard the confidentiality of these patients as only student registration numbers (which do not readily permit name recognition) were initially employed for identification purposes during initial data capture. Subsequent data transfer from these data sheets to diskettes was undertaken, under the auspices of the UCT Information Technology Services, by a person with no direct attachment to the University. It is consequently presumed that the individual performing this important task would have little or no working knowledge concerning the design principle behind UCT registration numbers. This step would serve to further enhance the confidentiality of the study participants.

6.1.4 Concluding Comments

The following model, proposed by Power (1991) and presented at the Health Informatics for Southern Africa (HISA) 1991 conference, demonstrates the spectrum of medical informatics. This material (refer to Figure 6.2) is highly relevant insofar as this research employs medical informatics (albeit in a non-digital form) as the data source for the results that appear in Chapter 5. In the UCT-SHS study, the Universe refers to the sum total of the University of Cape Town undergraduate and postgraduate student community from 1991 to 1993 who represent the largest study group employed (refer to section 4.2.3). It is from this Universe that individual students either consult the UCT-SHS with purely physical complaints or attend the UCT-SHS-MHS with psychological or psychiatric complaints – the former, under special circumstances detailed in section 4.2.2.1, constitute the set of controls used in this study who correspond to the mid-sized sample while the latter form the patients who represent the smallest sample employed (refer to section 4.2.1). The clinical observation (refer to section 1.3) is that historically disadvantaged (and educationally underprepared) Black students appear to be more likely to present with mental disorders at the UCT-SHS-MHS than their generally

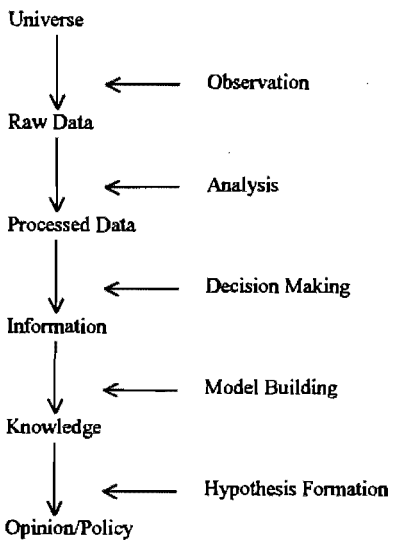
historically advantaged White peers. This outcome is compatible with the unique position, due to the legacy of apartheid, that these students have and, in many cases, still occupy in society.

Various medical and non-medical University records (refer to section 4.4 for further details) constitute the raw data that is analysed (refer to section 4.6 for further details) to yield the results obtained from this research. These results need to be correctly interpreted to ensure that findings (both statistically significant and non-significant) are appropriate to the University of Cape Town student population (viz. they are both coherent and plausible with current knowledge concerning this community). It is this active decision-making process that not only either confirms or rejects the nine stated Research Hypotheses (refer to section 4.5.1 for further details) but also succeeds in converting processed data into utilisable information (refer to section 6.3.2 for further details) concerning UCT-SHS-MHS attendance patterns.

Further detailed analysis of the basic descriptive demographic, academic, residential (home address), financial assistance and clinical-specific data (refer to section 4.3 for further details) permits more complex model building to assess interrelationships that may exist between these selected variables for students receiving evaluation and/or therapeutic intervention at the UCT-SHS-MHS during the study period between 1991 and 1993 (refer to section 5.2 for further details). This knowledge, consisting of both the basic descriptive data and the more complex models, could be used by relevant University authorities for strategic, tactical or operational management planning purposes (refer to section 6.3.2 for further details).

The final step in the research process utilising medical (and non-medical) informatics would be to formulate further working hypotheses from the results and models detailed in Chapter 5. Further student-based research may be necessary (refer to sections 6.4.1, 6.4.2 and 6.4.3 as well as Appendix XI for further details) before suitable data is available to permit the drafting of comprehensive policy documents to influence University opinion.

Figure 6.2 Spectrum of medical informatics (adapted from Power, 1991).



6.2 OVERALL STUDENT ATTENDEES AND SELECTED VARIABLES

This section functions to link section 3.3 of the Literature Review which details student mental health service attendees (Objective 1-specific data), student mental health service usage/utilisation (prevalence) rates (Objective 3-specific data) and the mean number of student mental health service consultations (Objective 4-specific data) to the corresponding results obtained from the UCT-SHS study. Therefore, various results and trends relating to developed (first world) countries, developing (third world) countries and Southern African universities will be compared to the results detailed in section 5.1 of this research work.

The candidate has purposely adopted a structural layout for this section of the Discussion chapter (whose structure largely resembles that of section 3.3 in the Literature Review and section 5.1 in the Results chapter) that will permit maximum inter- and intra-variable comparison. Refer to corresponding box in section 3.3 for further details.

At the onset it can be documented that the selected demographic, academic, residential (home address), financial assistance and clinical (diagnostic) variables investigated in the UCT-SHS study are not equally addressed in the literature for developed (first world) and developing (third world) countries or details forwarded from Southern African universities. Gender is, by far, the most commonly reported variable followed by clinical data, year of study and level of study-specific data. Residence (home address) is addressed in only three samples, gender and race/population group combined is outlined in only one sample – a second study by Alston (1974) compares two opposing race/population group-specific cohorts but controls non-minority student subjects by gender to match the profile of minority students, while language and financial assistance are not covered in any sample. It would therefore seem that there is an urgent need to obtain more information about these particular variables to increase the body of knowledge in the field of student mental health. This research can therefore be viewed as an attempt to at least partially redress this situation.

6.2.1 Overall Student Attendees

6.2.1.1 Patient-specific data

(a) Objective 1 (attendees)

There were 932 attendees (905 of whom were registered UCT students) at the UCT-SHS-MHS during the study period of 1 January 1991 to 31 December 1993.

- Only five of the 40 (12,5 per cent) samples quoted in the literature for developed (first world) countries reported sample sizes in excess of that employed in the UCT-SHS study.
- None of the three samples quoted in the literature for developing (third world) countries detailed sample sizes larger than that employed in the UCT-SHS study.

- Fourteen of the 19 (73,7 per cent) samples obtained from four Southern African universities relate sample sizes greater than that employed in the UCT-SHS study. However, it must be noted that these 14 samples included 12 of the 14 Vista University samples which include all students who sought career counselling and other services not necessarily related to the presence of mental disorders.

The UCT-SHS study with nearly 1 000 subjects is, therefore, one of the largest samples employed to study, inter alia, the characteristics of student mental health service attendees. This sample size should permit appropriate statistical analyses for fairly detailed stratifications according to selected demographic, academic, residential (home address), financial assistance and (where appropriate) clinical variables. This detailed statistical analysis should provide results which will significantly add to the existing knowledge relating to student mental health.

(b) Objective 2 (patients versus controls)

There were 1 924 attendees (1 919 of whom were registered UCT students) who attended the UCT-SHS but did NOT present at the UCT-SHS-MHS during the study period of 1 January 1991 to 31 December 1993.

This objective detailing medical controls cannot be further discussed with respect to the literature as there were no samples quoted for either developed (first world), developing (third world) – although German and Arya (1969, at Makerere University College, Uganda) did briefly mention certain characteristics of non-psychiatric patients attending the student health service at Makerere University College – or Southern African countries describing the use of medical controls.

(c) Objective 3 (patients versus the total student community)

The overall usage/utilisation rate for students attending the UCT-SHS-MHS was 39,1 per 1 000 students during the study period 1 January 1991 to 31 December 1993.

- Twenty three of the 40 (57,5 per cent) samples quoted in the literature for developed (first world) countries reported overall usage/utilisation rates in excess of that recorded at the UCT-SHS-MHS.
- Only one of the five (20,0 per cent) samples quoted in the literature for developing (third world) countries detailed overall usage/utilisation rates greater than that recorded at the UCT-SHS-MHS (German and Arya, 1969, at Makerere University College, Uganda).
- All four of the samples obtained from four Southern African universities relate overall usage/utilisation rates above that recorded at the UCT-SHS-MHS. As for Objective 1 above, it must be noted that one of these samples was Venter (1977) at the University of the Free State who included all students who sought career counselling and other services not necessarily related to the presence of mental disorders.

In the Literature Review it has been demonstrated that Reifler, Liptzin and Fox (1967) state not all students who present themselves as patients are diagnosed as sick and, conversely, not all non-patients are healthy. Thus one is unable to assess the true incidence or prevalence of psychiatric illness from mental health services usage/utilisation rates. However, the more acute or severe the illness, the greater is the probability of the individual's behaviour bringing him/her to the eye of the public and to the psychiatrist for evaluation.

Walters (1970) notes that increased usage/utilisation of college/university mental health services does not necessarily reflect a rise in the prevalence of mental illness but could rather be attributed to wider student awareness of psychiatric services together with more general student and faculty acceptance. Likewise, Reifler, Liptzin and Fox (1967) observe that students with situational or adjustment problems were more inclined to talk to a psychiatrist without defining themselves as psychiatric patients. Therefore, the authors note, there appeared to be a growing sophistication among students and, hopefully, a weakening of the stigmata attached to seeking help for emotional disturbances. As the UCT-SHS study is not a longitudinal survey, it will not be possible to assess whether the local student body is becoming more or less sensitive to the benefits to be derived from receiving psychotherapy at the UCT-SHS-MHS. Such research should prove most useful to relevant University authorities in view of the transformation process that is currently affecting the University leading to a rapid increase in the number of historically disadvantaged Black students.

Baker (1964) states that the following factors should be considered in interpreting quoted usage/utilisation rates: (i) some students will prefer private or other extra-university professional resources to mental health services offered within the college/university; (ii) other troubled students will prefer to seek help from other kinds of persons or agencies inside or outside the college/university, and (iii) they may not seek help at all. These issues have largely been addressed in section 6.1 and classified according to various categories appearing in the model presented by Goldberg and Huxley (1980). Likewise, Thompson, Bentz and Liptzin (1973) report that mental health service usage/utilisation is influenced by: (i) students' willingness to seek help; (ii) service availability, and (iii) the extent of non-psychiatric services on campus (i.e. advisors, chaplains etc.).

(d) Objective 4 (mean number of consultations)

The overall mean number of consultations for students attending the UCT-SHS-MHS was 3,8 during the study period 1 January 1991 to 31 December 1993.

- Eight of the 12 (66,7 per cent) samples quoted in the literature for developed (first world) countries reported overall mean number of consultations in excess of that recorded at the UCT-SHS-MHS.
- The sample quoted in the literature for developing (third world) countries detailed an overall usage/utilisation rate less than that recorded at the UCT-SHS-MHS (Wig, Nagpal and Khanna, 1971, at Panjab University, India).
- For mean number of consultation data, no sample reported the overall mean number of consultations for Southern African countries.

In the Literature Review it has been stated that Gibbs (1975) notes the duration of therapy was sometimes not closely related to the severity of the presenting symptoms or to the diagnosis. However, Dunn et al. (1980) report that patient data reveals that patients with more serious diagnoses utilise more therapeutic time than those with less serious problems. Nixon (1981) feels that many of the emotional difficulties which college/university students encounter can be resolved rather quickly with competent help. In this vein, Pinkerton (1994) notes that annual college/university mental health service statistics reveal that 50 per cent to 60 per cent of all student attendees are seen for very brief psychological interventions of five or less consultations. The standing rule of a maximum of six consultations per student which is in operation at the

UCT-SHS-MHS – although this can be waived at the discretion of the chief clinical psychologist – would facilitate the type of brief psychotherapy envisaged by Pinkerton.

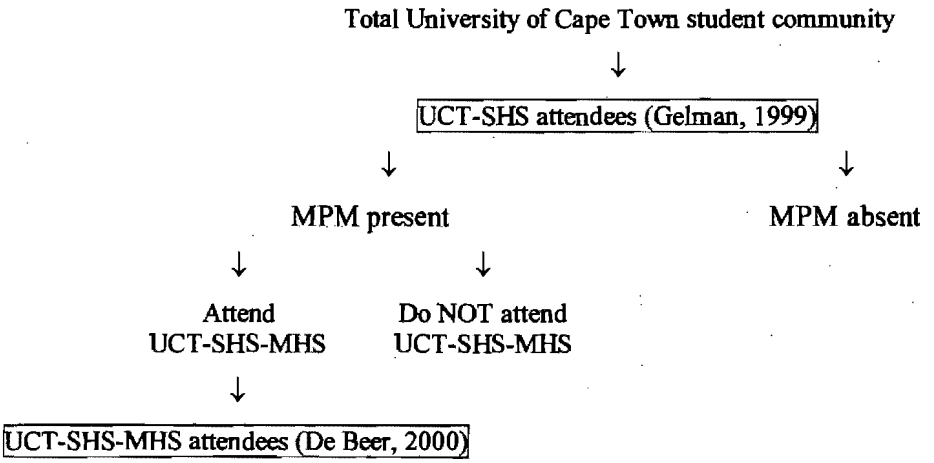
(e) Comparisons to Gelman's study

Gelman (1999), in her study of students attending the UCT-SHS between 26 June 1998 and 11 July 1998, documents that 9,8 per cent of her sample expressed a negative subjective sense to their adjustment to the University, 12,8 per cent acknowledged a negative subjective sense to their academic coping at the University and 42,2 per cent reported to not coping financially at the University. These three areas of concern addressed by Gelman are all important aetiological factors in the development of mental disorders that may or may not present at the UCT-SHS-MHS. Extrapolation of these results to the total student community would suggest that 98,0 per 1 000 of the total student community have failed to adjust to the predominantly Eurocentric culture of the University that may represent a foreign culture to a section of the student body, 128,0 per 1 000 of the total student community are struggling to meet the exacting academic demands of the University which may prove overwhelming to a section of the student body who may be academically underprepared for a tertiary education and fully 421,8 per 1 000 of the total student community are subject to financial problems and, probably, a host of stress-related disorders secondary to these economic concerns due to a section of the student community being historically socio-economically disadvantaged. Many of the latter group of students are probably receiving UCT-administered financial aid and thereby represent the subset of students who recorded the highest usage/utilisation rate per 1 000 students in the abridged/highly abridged format (100,3). Therefore there appears to be a clear and unequivocal association between the presence of these financial problems and attendance at the UCT-SHS-MHS for psychological or psychiatric complaints. Such students can be expected to contribute an increasing proportion of UCT-SHS-MHS attendees as the University continues with its transformation process to enhance the representivity of the student body by registering an increasing number of disadvantaged students.

The final all-important indicator obtained by Gelman relates to the prevalence of minor psychiatric morbidity (MPM) in students attending the UCT-SHS for medical or emotional complaints (i.e. these students correspond to a combination of patients (UCT-SHS-MHS attendees – Objective 1-specific data) and controls (UCT-SHS medical attendees – Objective 2-specific data) employed in this research work). It is important to recognise the fundamental difference that exists between the samples employed in these studies assessing student mental health at the University of Cape Town. The more specific UCT-SHS-MHS sample corresponds to Level 3 (medical officer consultations) and Level 4 (psychologist and/or psychiatrist consultations) of the model presented by Goldberg and Huxley (1980) while the less specific UCT-SHS waiting room sample conforms with Level 1 (self-acknowledged medical complaints) and Level 2 (self-acknowledged emotional complaints) of this model (refer to Figure 6.3). Extrapolation of Gelman's results to the total student community would suggest that as many as 291,5 per 1 000 of the total student community are affected by minor psychiatric morbidity (SRQ $\geq$8) while 50,6 per 1 000 are subject to more serious mental disorders (SRQ $\geq$15). It must be noted that both the less severe and, especially, the more severe forms

of minor psychiatric morbidity within the student body may lead to functional impairment severe enough to threaten these students' academic careers.

Figure 6.3 Relationship between Gelman's study conducted at the UCT-SHS and this research which employs UCT-SHS-MHS patient records.



Gelman reports that the prevalence estimate of possible minor psychiatric morbidity within students attending the UCT-SHS "falls within the mid-range" of prevalence rates found in other studies in developing (third world) countries (refer to Table 6.2 for details). These studies report a wide range of prevalence rates within the community from a minimum figure of 83 per 1 000 (Freeman et al., 1991) to a maximum value of 690 per 1 000 (Oduowle and Ogunyemi, 1984). Gelman notes that the figure of 291,5 per 1 000 students most closely resembles those recorded by Dhadphale et al. (1982) at 258 per 1 000, Kortmann (1990) at 270 per 1 000, Patel (1998) at 270 per 1 000 and Reeler et al. (1993) at 260 per 1 000. Therefore these findings suggest that UCT-SHS attendees (a disproportionate proportion of whom were historically disadvantaged African students) and, by implication, students registered at the University of Cape Town form a community that is compatible with those existing in other developing (third world) and Southern African countries. This data forms a useful community-based adjunct to the college/university mental health service attendance data previously detailed in the Literature Review – especially the somewhat limited number of samples obtained from developing (third world) and Southern African tertiary educational institutions.

Table 6.2 The prevalence of minor psychiatric morbidity in general health care settings in developing (third world) countries (adapted from Gelman, 1999).

Authors	Location	Instrument	Sample	Prevalence rate per 1 000
De Jong, De Klein and Ten Horn (1986)	Guinea-Bissau	SRQ/PSE	n=252 >15 yrs	120 – 180[1]**
Dhadphale and Ellison (1983)	Kenya (urban)	SRQ/SPI	n=200 18-55 yrs	320[1]*
Dhadphale, Ellison and Griffin (1982)	Kenya (rural)	SRQ/SPI	n=186 18-55 yrs	258[1]*
Diop, Collignon, Gueye and Harding (1982)	Senegal	SRQ (1 stage)	n=933 adults	162
Freeman, Seris, Mathebula and Price (1991)	South Africa (SE Transvaal)	SRQ/PSE	n=363 >15 yrs	83[12]**
Gureje and Obikoya (1992)	Nigeria	GHQ12/CIDI	n=787	351
Hall and Williams (1987)	Zimbabwe	SRQ/PSE	n=448 >16 yrs	105[1]**
Harding, De Arango, Baltazar, Climent, Ibrahim, Ladrigo-Ignacio, Murthy and Wig (1980)	Sudan	SRQ/PSE	n=360 >17 yrs	106[1]*
Kortmann (1990)	Ethiopia	SRQ	n=30 >17 yrs	270[1]*
Mari and Williams (1984)	Brazil	GHQ/CIS	n=120 >15 yrs	460[1]**
Miller, Swartz and Rumble (1991)	South Africa (Mamre)	GHQ28 (1 stage)	n=159 >15 yrs	450
Ndetei and Muhangi (1979)	Kenya	Clinical Examination (1 stage)	n=140	200
Oduowle and Ogunyemi (1984)	Nigeria	GHQ-30 (1 stage)	n=80	690
Patel (1998)	Zimbabwe	SSQ/CISR/clinical judgement of care provider	n=152	270
Reeler, Williams and Todd (1993)	Zimbabwe	SRQ (1 stage)	n=1 236	260
Zwi and Thom (1991)	South Africa (Soweto)	SRQ/PSE	n=301 16-60 yrs	103 – 143[1]**

[1]In comparing prevalence estimates, it should be noted that those studies marked ** did not validate their screening instrument for the particular context of the study and those marked * did not weight their prevalence estimates back to the original sample. The implication of this (according to Gelman) is that, strictly, these prevalence estimates are not directly comparable.

[2]Parry (1996) suggests that the low prevalence of MPM reported by Freeman et al. (1991) may be a result of the high cut-off score used on the SRQ.

Abbreviations appearing in Table:
CIDI = Composite International Diagnostic Interview
CIS = Clinical Interview Schedule
CISR = Revised Clinical Interview Schedule
GHQ = General Health Questionnaire
PSE = Present State Examination
SSQ = Shona Symptom Questionnaire

Section 6.1.2.2 has previously highlighted limitations with interpretation of UCT-SHS data – especially issues involving the generalisability of UCT-SHS data or attendees to community-based student patterns. Gelman's sample, despite being subject to the same methodological problems would, nevertheless, appear to offer a further indirect indicator of minor psychiatric morbidity within the total UCT student community. This sample would therefore serve as a local adjunct to the figures, quoted in section 3.1.3.4(e)(iv), proposed by Segal (1966) in a review article comparing the findings from five studies of college/university populations in the USA. Therefore, the number of students attending the University of Cape Town during 1991 to 1993 who are likely to be affected by minor psychiatric morbidity is as follows:

(i) Gelman's figures

- SRQ set at a value of ≥15 corresponds to a prevalence of 50,6 per 1 000 of 23 158 students affected by more severe forms of minor psychiatric morbidity which equals 1 172 students. However, there were 932 student attendees at the UCT-SHS-MHS during the study period which leaves a DEFICIT of 240 students.
- SRQ set at a value of ≥8 corresponds to a prevalence of 291,5 per 1 000 of 23 158 students affected by less severe forms of minor psychiatric morbidity which equals 6 751 students. However, there were 932 student attendees at the UCT-SHS-MHS during the study period which leaves a DEFICIT of 5 819 students.

(ii) Segal's figures

- Proposed prevalence of 75,0 per 1 000 (as, according to the author, "at least 7 or 8 per cent of students are almost certainly fairly seriously emotionally disturbed") of 23 158 students affected by minor psychiatric morbidity which equals 1 737 students. However, there were 932 student attendees at the UCT-SHS-MHS during the study period which leaves a DEFICIT of 805 students.
- Proposed prevalence of 150,0 per 1 000 (as, according to the author, "there are strong grounds for assuming that the total proportion is almost twice as high" as the above figure) of 23 158 students affected by minor psychiatric morbidity which equals 3 474 students. However, there were 932 student attendees at the UCT-SHS-MHS during the study period which leaves a DEFICIT of 2 542 students.

These figures suggest that students would appear amenable to seeking professional assistance for more serious mental illness. This is suggested – but cannot be confirmed – by the smaller deficit recorded by student attendees in Gelman's study for SRQ values in excess of or equal to 15. However, it would also seem that there is still some reticence among students to seek evaluation and/or therapeutic intervention for such complaints as indicated by the fairly more substantial deficit between attendees and SRQ values greater than or equal to 8. Likewise, Segal's results, obtained from a developed (first world) country, suggest that only 26,8 per cent of "fairly seriously emotionally disturbed" students will attend the UCT-SHS-MHS – however, it is not possible to assess how many of the non-attendees somatised their underlying psychological complaint and presented at the UCT-SHS with a seemingly purely medical complaint that was not correctly diagnosed by the resident medical officer (i.e. the patient would fail to pass through the second filter in the model presented by Goldberg and Huxley, 1980). These results, which do not distinguish between the severity of background mental illness in the student body (although the author does concede that roughly one-third of the college/university students whose emotional status had been examined in true prevalence studies had an impaired capacity to adapt to the changing circumstances and complexities of adult demands and responsibilities), are, therefore, not as specific as those documented by Gelman at the same venue in which the UCT-SHS study was conducted.

In a further objective of her study, Gelman reports a detection rate by clinical staff (nurses and medical officers) of minor psychiatric morbidity of 25 per cent. This figure is based upon the completion of the Health Staff Rating (HSR) questionnaire by the resident health practitioner – this schedule, which only takes a few seconds per patient to complete, consists of 4-5 yes/no questions and has been used by De Jong, De Klein and Ten Horn (1986), Hall and Williams (1987) and others. Gelman concludes that there was therefore

a 75 per cent rate of "hidden psychiatric morbidity" compared to the findings of the SRQ. This result apparently corresponds with research conducted by Freeman et al. (1991) who found a detection rate of less than 33 per cent. However, the author continues, the detection rate is higher than those reported by Hall and Williams (1987) at 4,25 per cent and Abiodun (1989) at 14,6 per cent. However, detection rates increased at the UCT-SHS as SRQ scores increased, which corresponds with the finding by Ormel et al. (1991) that rates of detection are higher for severe disorders than for less severe disorders. In attempting to explain this discrepancy between the existence of possible psychiatric cases within the community (Levels 1 and 2 of the Goldberg and Huxley model) and the number of successful diagnoses made by medical staff (Levels 3 and above of the Goldberg and Huxley model), Ormel et al. (1990) quoted by Gelman (1999) state:

> *when a GP does not record a psychiatric disorder in a patient, this not necessarily implies that the GP is unaware of the psychological distress of the patient. The GP might even be aware of a possible psychiatric disorder but may consider psychological labelling and/or mental health treatment inappropriate or inexpedient. For instance, the GP might think that the psychiatric disorder will remit spontaneously or is untreatable, that labelling and treatment may do more harm than good, that treatment is not feasible due to time or financial constraints or patient's willingness to accept a biopsychosocial re-interpretation of physical complaints or a referral to a mental health specialist, or that psychiatric disorders are outside the realm of GP's competence or responsibility.*
>
> (Orman et al., 1990: p. 920, quoted from Gelman, 1999, p. 79-80)

This reasoning might be particularly valid in the University setting where the presence of a diagnosed mental disorder in a student could compromise that student's academic career. Inappropriate responses from lecturers and other relevant University authorities could result in further functional impairment which, in turn, could lead to sponsors withdrawing their financial backing of these affected students. In order to prevent this negative outcome, often due to the existence of ignorant beliefs amongst certain members of the University community, resident medical officers may choose to withhold many psychiatric diagnoses presenting in students attending the UCT-SHS.

– **Concluding comments**

There are certain limitations in both extrapolating Gelman's UCT-SHS attendee-specific findings to the total UCT student community and comparing them to the UCT-SHS-MHS-specific results detailed in Chapter 5 of this research work. The extrapolation is potentially biased by the fact that it is NOT possible to surmise the proportions of students who seek assistance for their underlying mental disorders at either: (i) no health care facility (i.e. do not seek treatment); (ii) a private health care facility, or (iii) a government health care facility (e.g. Groote Schuur Hospital Psychiatry Outpatients Department). The validity of the comparison is potentially affected by the fact that it is not possible to ascertain whether all the patients presenting at the UCT-SHS-MHS for evaluation and/or therapeutic intervention during the study period were actually subject to minor psychiatric morbidity as assessed by, inter alia, the SRQ instrument employed by Gelman in her study. It would, however, appear to

represent an appropriate belief to assume that the vast majority of these UCT-SHS-MHS attendees were indeed affected by some degree of psychiatric morbidity to precipitate their presentation.

6.2.1.2 Clinical/diagnostic data

(a) Introductory comments

It must be noted that it is difficult to compare the UCT-SHS-MHS percentage of total diagnoses figure quoted in Objective 1 (attendees) to corresponding figures obtained from other tertiary educational institutions in developed (first world) countries, developing (third world) countries and Southern African countries. This is because some of these figures refer to the percentage of patients affected by an individual diagnosis rather than the percentage of total diagnoses per se – therefore, if multiple diagnoses/complaints were present in the majority of mental health services attendees, the results quoted in the literature would uniformly be considerably higher than those recorded at the UCT-SHS-MHS. As this has indeed been the case with several of these samples, it is to be expected that the UCT-SHS-MHS results would appear to reflect a generalised and non-selective underdiagnosis of most of the conditions reported in this subdivision. Consequently, any disorder that is generally more widely reported at the UCT-SHS-MHS than in college/university mental health services elsewhere in the world, must then be an extremely important condition worthy of serious attention by relevant University authorities.

On the other hand, the UCT-SHS-MHS usage/utilisation (prevalence) rate per 1 000 students detailed in Objective 3 (patients versus the total student community) should be more compatible with corresponding figures quoted for other college/university mental health services in developed (first world), developing (third world) and Southern African countries. However, more intensive reporting of either presenting complaints by student attendees (often by means of self-administered questionnaires) and/or diagnoses by resident therapists might, this time, suggest an erroneously low prevalence of most of the conditions recorded in this subdivision amongst University of Cape Town students.

As with Objective 3 above, there should be no problem in comparing UCT-SHS-MHS Objective 4 (mean number of consultations)-specific data with corresponding figures documented by other college/university mental health services throughout the world. However, these facilities often offer differing levels of service to their students (i.e. some restrict themselves to short-term psychotherapy like the UCT-SHS-MHS while others undertake longer-term treatment which would obviously inflate the mean number of consultations figure quoted). Therefore, this possibly selectively enhanced delivery of counselling services may erroneously suggest that certain psychological or psychiatric complaints affecting students presenting at the UCT-SHS-MHS may not be severe enough to warrant longer-term therapy. In reality, many students with such severe and/or intractable mental disorders are transferred to other healthcare facilities (e.g. Groote Schuur Hospital Psychiatry Outpatients Department or William Slater Hospital) for further more intensive therapeutic intervention. However, it must be noted that compatible findings for the mean number of consultations required by students for the major diagnostic categories, individual V-codes and selected

"other" disorders detailed in the UCT-SHS study are reported in only one sample (Friedman and Coons, 1969, at Indiana University, USA) from developed (first world), developing (third world) and Southern African countries.

Note: This subsection does not address Objective 2 (patients versus controls) as these findings are not relevant to the clinical/diagnostic data.

(b) Affective disorder

(i) Objective 1 (attendees)

Table 5.1 demonstrates and Figure 5.1 illustrates that student attendees were assessed by residential professional staff as recording 100 diagnoses of affective disorder (or 10,9 per cent of total diagnoses) at the UCT-SHS-MHS during the study period of 1991 to 1993.

- The UCT-SHS-MHS percentage of total diagnoses result is exceeded by 19 of the 23 (82,6 per cent) samples for affective disorder (or compatible disorders) quoted in the literature for developed (first world) countries.
- The UCT-SHS-MHS percentage of the total diagnoses result is exceeded by both of the samples for affective disorder (or compatible disorders) quoted in the literature for developing (third world) countries (German and Arya, 1969, at Makerere University College, Uganda, and Wig, Nagpal and Khanna, 1971, at Panjab University, India).
- The UCT-SHS-MHS percentage of total diagnoses result is exceeded by five of the seven (71,4 per cent) samples for affective disorder (or compatible disorders) obtained from four Southern African universities.

(ii) Objective 3 (patients versus the total student community)

Table 5.2 demonstrates that the usage/utilisation (prevalence) rate for affective disorder presenting at the UCT-SHS-MHS is 4,3 per 1 000 students during the study period of 1991 to 1993.

- The UCT-SHS-MHS usage/utilisation (prevalence) rate is exceeded by four of the six (66,7 per cent) samples for affective disorder (or compatible disorders) quoted in the literature for developed (first world) countries (Craig, 1974, at an Anonymous Arts College in Baltimore, USA; Stangler and Printz, 1980, at the University of Washington, USA; Winer and Dorus, 1972, at the University of Chicago, USA, and Wogan and Andur, 1974, at the University of Connecticut, USA).
- For usage/utilisation (prevalence) rate data, no sample reported the usage/utilisation (prevalence) rate for affective disorder (or compatible disorders) for developing (third world) countries.
- The UCT-SHS-MHS usage/utilisation (prevalence) rate is exceeded by all four of the samples for affective disorder (or compatible disorders) obtained from four Southern African universities (Mupunga, 1997, at the University of Zimbabwe; Naidoo, 1997, for 1995 attendees; Naidoo, 1997, for 1996 attendees at the University of the Western Cape, and Venter, 1997, at the University of the Free State).

(iii) Objective 4 (mean number of consultations)

Table 5.4 demonstrates that the mean number of consultations for affective disorder presenting at the UCT-SHS-MHS is 5,7 consultations per student during the study period of 1991 to 1993.

- The UCT-SHS-MHS mean number of consultations is exceeded by the sample for affective disorder (or compatible disorders) quoted in the literature for developed (first world) countries (Friedman and Coons, 1969, at Indiana University, USA).
- For mean number of consultation data, no sample reported the mean number of consultations for affective disorder (or compatible disorders) for developing (third world) countries.
- For mean number of consultation data, no sample reported the mean number of consultations for affective disorder (or compatible disorders) for Southern African countries.

In the Literature Review it has been shown that affective disorders, which form relatively important diagnoses in developed (first world), developing (third world) and Southern African countries, can be responsible for much morbidity in the student community. In this vein, Wright-Short (1967) notes that a depressive reaction, the occurrence of which may not always be recognised at examination time or any other time, may inhibit study completely, and as work falls further into arrears, so may the illness become intensified. Likewise, Nicholi (1967) notes that depression is by far the most frequent and the most significant causal factor in the decision of a student to interrupt or terminate his/her college/university experience. The above possible underdiagnosis of affective disorders by resident psychologists, psychiatrist and medical officers – as suggested by both the comparatively low percentage of total diagnoses (Objective 1) and usage/utilisation (prevalence) rate per 1 000 students (Objective 3) results recorded at the UCT-SHS-MHS – could therefore seriously undermine the academic careers of such students who are consequently not receiving appropriate therapy for their underlying complaints.

Furthermore, Nicholi (1967) observes that the most frequent cause of depression among dropouts is related to an awareness of a disparity between the ideal self as a uniquely gifted intellectual achiever and the real self as one of thousands of outstanding students struggling in a threateningly competitive environment. This awareness, gradual or abrupt, results in the clinical picture frequently observed in the dropout: (i) feelings of lassitude; (ii) inadequacy; (iii) hopelessness; (iv) low self-esteem, and (v) inability to study. As undiagnosed and untreated affective disorders could result in failure and subsequent exclusion from the University on academic grounds, it is important for all students to be advised that these self-doubts are an integral part of the normal adjustment to university. They should, therefore, be encouraged to openly discuss such feelings with their peers and, if necessary, with their tutors and lecturers. Any students who, despite the above actions, are still feeling insecure and are subject to any of the above symptoms outlined by Nicholi should be encouraged to receive further assessment at the UCT-SHS which could, in turn, lead to appropriate evaluation and/or therapeutic intervention at the UCT-SHS-MHS. Such a procedure could possibly save the academic careers of several students who are annually forced to leave the University.

Although affective disorder is obviously a condition that can affect any member of the student body, there are certain social dynamics that are unique to particular subsets of students which can place them at additional risk. For example, the Literature Review has documented Gibbs (1975) reporting that Black students' feelings of depression and anger could often be traced to problems in other areas of social, personal or academic adjustment. Indeed, some students were overwhelmed by depression or hostility, which had a debilitating effect on their ability to handle their normal tasks, but seemed unrelated to specific precipitating

events. The author notes that many of these symptoms experienced by Black students are directly related to their membership of a disadvantaged minority group (in the USA). This is accompanied by feelings of inferiority, worthlessness, hostility, anger and fear, all of which impede his/her development as a person and negatively affect his/her academic performance and his/her interpersonal skills. This topic has been further addressed in section 3.1.3.1(b) which details various proposed stage models of racial identity development relating to Black students in the USA. Although (perhaps even because) they form a disadvantaged majority group in South Africa which is subject to a similarly restrictive set of social dynamics, there is no reason to believe the local Black students attending the University of Cape Town would not be subject to the same range of negative emotions as their American peers and, consequently, be prone to the same detrimental outcome. As stated above, the consequence of such an outcome could easily lead to the premature termination of the student's university career.

[Refer to section 6.2.2.3 for details of affective disorders diagnosed in Black (African, Coloured and Indian) students attending the UCT-SHS-MHS.]

(c) Adjustment disorder

(i) Objective 1 (attendees)

Table 5.1 demonstrates and Figure 5.1 illustrates that student attendees were assessed by resident professional staff as recording 272 diagnoses of adjustment disorder (or 29,6 per cent of total diagnoses) at the UCT-SHS-MHS during the study period of 1991 to 1993.

- The UCT-SHS-MHS percentage of total diagnoses result is exceeded by only four of the 18 (22,2 per cent) samples for adjustment disorder (or compatible disorders) quoted in the literature for developed (first world) countries (Craig, 1974, at an Anonymous Arts College in Baltimore, USA; Dunn et al., 1980, at the College Mental Health Center, Boston, USA; Hersch, Nazario and Backus, 1983, at the University of Massachusetts at Amherst, USA, and U'ren, Conrad and Patterson, 1973, at the US Military Academy at Westpoint, USA).
- For attendance data, no sample reported the attendance data for adjustment disorder (or compatible disorders) for developing (third world) countries.
- The UCT-SHS-MHS percentage of total diagnoses result is exceeded by one of the two (50,0 per cent) samples for adjustment disorder (or compatible disorders) obtained from four Southern African universities (Venter, 1997, at the University of the Free State).

(ii) Objective 3 (patients versus the total student community)

Table 5.2 demonstrates that the usage/utilisation (prevalence) rate for adjustment disorder presenting at the UCT-SHS-MHS is 11,7 per 1 000 students during the study period of 1991 to 1993.

- The UCT-SHS-MHS usage/utilisation (prevalence) rate is exceeded by only one of the six (16,7 per cent) samples for adjustment disorder (or compatible disorders) quoted in the literature for developed (first world) countries (Craig, 1974, at an Anonymous Arts College in Baltimore, USA).
- For usage/utilisation (prevalence) rate data, no sample reported the usage/utilisation (prevalence) rate for adjustment disorder (or compatible disorders) for developing (third world) countries.

- The UCT-SHS-MHS usage/utilisation (prevalence) rate is exceeded by only one of the two (50,0 per cent) samples for adjustment disorder (or compatible disorders) obtained from four Southern African universities (Venter, 1997, at the University of the Free State).

(iii) Objective 4 (mean number of consultations)

Table 5.4 demonstrates that the mean number of consultations for adjustment disorder presenting at the UCT-SHS-MHS is 4,1, consultations per student during the study period of 1991 to 1993.

No sample quoted in the literature reported the mean number of consultations for adjustment disorder.

As adjustment problems seem to be particularly prevalent amongst students attending the University of Cape Town, relevant University authorities should institute measures to facilitate the acclimation of students to their new and, in many cases, threatening environment. Such measures should be sensitive to the diverse cultures existing amongst the student body – especially those of historically disadvantaged Black students who generally derive from a culture that is profoundly at odds with the predominantly Eurocentric culture of the University. Appropriate orientation programmes for the benefit of these students, preferably initiated and supervised by sympathetic Black academic staff to highlight and resolve these very real cross-cultural problems, should hopefully prove most beneficial to these students.

In the Literature Review it has been stated that Craig (1974) feels that reactive depression (refer to affective disorders above) is related to adjustment disorders as both diagnostic categories are primarily based on the student's response to immediate stress. Therefore, there is the very real possibility that several affective disorders presenting in students attending the UCT-SHS-MHS may have been erroneously diagnosed as adjustment disorders by resident psychologists, psychiatrist and medical officers. This potential error might serve to explain the high prevalence of adjustment disorders coupled with the low prevalence of affective disorders recorded at the UCT-SHS-MHS. The Literature Review has frequently mentioned the additional stress affecting historically disadvantaged Black students attending the University so that those students could, consequently, quite easily be predisposed to both these conditions.

(d) V-codes

(i) Objective 1 (attendees)

Table 5.1 demonstrates and Figure 5.1 illustrates that student attendees were assessed by resident professional staff as recording 212 diagnoses of V-codes (or 19,2 per cent of total diagnoses) at the UCT-SHS-MHS during the study period of 1991 to 1993.

- The UCT-SHS-MHS percentage of total diagnoses result is exceeded by only one of the two (50,0 per cent) samples for V-codes quoted in the literature for developed (first world) countries (Hersch, Nazario and Backus, 1983, at the University of Massachusetts at Amherst, USA).

- For attendance data, no sample reported the attendance data for V-codes for developing (third world) countries.
- For attendance data, no sample reported the attendance data for V-codes for Southern African countries.

(ii) Objective 3 (patients versus the total student community)

Table 5.2 demonstrates that the usage/utilisation (prevalence) rate for V-codes presenting at the UCT-SHS-MHS is 9,2 per 1 000 students during the study period of 1991 to 1993.

No sample quoted in the literature reported the usage/utilisation (prevalence) rate for V-codes.

(iii) Objective 4 (mean number of consultations)

Table 5.4 demonstrates that the mean number of consultations for V-codes presenting at the UCT-SHS-MHS is 3,6, consultations per student during the study period of 1991 to 1993.

No sample quoted in the literature reported the mean number of consultations for V-codes.

However, many of the presenting complaints detailed in the literature are compatible with the individual V-codes and will be discussed separately below.

– Relationship problem

(i) Objective 1 (attendees)

Table 5.1 demonstrates that student attendees were assessed by resident professional staff as recording 88 diagnoses of relationship problem (or 9,6 per cent of total diagnoses) at the UCT-SHS-MHS during the study period of 1991 to 1993.

- The UCT-SHS-MHS percentage of total diagnoses result is exceeded by four of the five (80,0 per cent) samples for relationship problem quoted in the literature for developed (first world) countries.
- For attendance data, no sample reported the attendance data for relationship problem for developing (third world) countries.
- The UCT-SHS-MHS percentage of total diagnoses result is exceeded by both of the samples for relationship problem obtained from four Southern African universities (the two University of the Western Cape samples reported by Naidoo, 1997).

(ii) Objective 3 (patients versus the total student community)

Table 5.2 demonstrates that the usage/utilisation (prevalence) rate for relationship problem presenting at the UCT-SHS-MHS is 3,8 per 1 000 students during the study period of 1991 to 1993.

- The UCT-SHS-MHS usage/utilisation (prevalence) rate is exceeded by the sample for relationship problem quoted in the literature for developed (first world) countries (Winer and Dorus, 1972, at the University of Chicago, USA).
- For usage/utilisation (prevalence) rate data, no sample reported the usage/utilisation (prevalence) rate for relationship problem for developing (third world) countries.
- The UCT-SHS-MHS usage/utilisation (prevalence) rate is exceeded by both of the samples for relationship problem obtained from four Southern African universities (the two University of the Western Cape samples reported by Naidoo, 1997).

Although relationship problem, like any other psychological or psychiatric complaint, is obviously a condition that can affect any member of the student body, there are again (as in the case of affective disorder) certain social dynamics that are unique to particular subsets of students which potentially place them at additional risk. For example, the Literature Review has documented Gibbs (1975) noting that Black female students presented feelings of depression, anger or hostility because they felt that Black male students were inattentive, insensitive to their needs for affection and companionship, and overly preoccupied with sexual concerns. On the other hand, several Black male students admitted that they were often more attracted to White female students with similar interests and values, but felt guilty and disloyal to Black females. There is no reason to believe that local Black male and female students attending the University of Cape Town would not be subject to the same fears and concerns as their American peers as they are also clearly subject to a similar set of social dynamics.

While the outcome of undiagnosed and untreated relationship problems may not be as severe as the result of unrecognised affective disorders (although it is very likely that these two conditions could coexist), there is, nevertheless, the likelihood of considerable functional impairment in such students. As these students generally derive from an academically underprepared background and are, consequently, subject to an increased academic burden, any resultant level of academic impairment could have a profoundly negative effect on the success of their studies. Therefore such students should be encouraged to seek early assistance for these relationship problems before they jeopardise their university careers.

[Refer to section 6.2.2.3 for details of relationship problems diagnosed in Black (African, Coloured and Indian) students attending the UCT-SHS-MHS.]

– Family problem

(i) Objective 1 (attendees)

Table 5.1 demonstrates that student attendees were assessed by resident professional staff as recording 50 diagnoses of family problem (or 10,9 per cent of total diagnoses) at the UCT-SHS-MHS during the study period of 1991 to 1993.

- The UCT-SHS-MHS percentage of total diagnoses result is exceeded by all seven of the samples for family problem quoted in the literature for developed (first world) countries.
- For attendance data, no sample reported the attendance data for family problem for developing (third world) countries.
- The UCT-SHS-MHS percentage of total diagnoses result is exceeded by both of the samples for family problem obtained from four Southern African universities (the two University of the Western Cape samples reported by Naidoo, 1997).

(ii) Objective 3 (patients versus the total student community)

Table 5.2 demonstrates that the usage/utilisation (prevalence) rate for family problem presenting at the UCT-SHS-MHS is 2,2 per 1 000 students during the study period of 1991 to 1993.

- The UCT-SHS-MHS usage/utilisation (prevalence) rate is exceeded by the sample for family problem quoted in the literature for developed (first world) countries (Winer and Dorus, 1972, at the University of Chicago, USA).
- For usage/utilisation (prevalence) rate data, no sample reported the usage/utilisation (prevalence) rate for family problem for developing (third world) countries.
- The UCT-SHS-MHS usage/utilisation (prevalence) rate is exceeded by both of the samples for family problem obtained from four Southern African universities (the two University of the Western Cape samples reported by Naidoo, 1997).

Although family problem, like any other psychological or psychiatric complaint, is obviously a condition that can affect any member of the student body, there are (as in the case of affective disorder and relationship problem) certain social dynamics that are unique to particular subsets of students which potentially place them at additional risk. For example, the Literature Review has documented Gibbs (1975) noting that problems with parents or families affecting Black students usually centred around the issues of autonomy, financial management, social activities and socio-political attitudes and involvement. The majority of this group felt that there was a considerable generation gap in values about lifestyle and political opinions. For the working-class student (who corresponds to the local historically disadvantaged Black student), the problem of independence from parental authority was complicated by the fact that he/she was often depriving the family of much needed additional income and creating greater financial and social strains for the whole family. Lower-class Black students are further handicapped in their drive for autonomy by two other characteristics of their culture – their circumscribed environment, which limited their opportunities for adapting to new situations, and their extended family structure, which emphasises collective priorities and goals and frequently does not reward individual efforts to achieve or to differentiate oneself from the rest of the family (Rainwater, 1967; Schulz, 1969). This phenomenon reported amongst minority Black students in the USA is, at least, as relevant, if not more so, for their local disadvantaged majority peers in South Africa who are burdened by additional traditional duties and expectations.

Consequently, it would be expected that the percentage of total diagnoses (Objective 1) and usage/utilisation (prevalence) rate per 1 000 students (Objective 3) for family disorder recorded at the

UCT-SHS-MHS should at least correspond to, if not exceed, those reported in the predominantly White colleges and universities in developed (first world) countries. The fact that these UCT-SHS-MHS results uniformly recorded lower (rather than higher) values is highly suggestive that resident psychologists, psychiatrist and medical officers have underdiagnosed this potentially important condition. While the outcome of undiagnosed and untreated family problems may not be as severe as the result of unrecognised affective disorders (although it is possible that these two conditions could coexist), there is, nevertheless – as in the case of relationship problem, the likelihood of considerable functional impairment in such students. Therefore, it is important that such students should seek early assistance for these family problems before they jeopardise their university careers.

[Refer to section 6.2.2.3 for details of family problems diagnosed in Black (African, Coloured and Indian) students attending the UCT-SHS-MHS.]

– Academic problem

(i) Objective 1 (attendees)

Table 5.1 demonstrates that student attendees were assessed by resident professional staff as recording 20 diagnoses of academic problem (or 2,2 per cent of total diagnoses) at the UCT-SHS-MHS during the study period of 1991 to 1993.

- The UCT-SHS-MHS percentage of total diagnoses result is exceeded by all 16 of the samples for academic problem quoted in the literature for developed (first world) countries.
- The UCT-SHS-MHS percentage of total diagnoses result is exceeded by the sample for academic problem quoted in the literature for developing (third world) countries (Wig, Nagpal and Khanna, 1971, at Panjab University, India).
- The UCT-SHS-MHS percentage of total diagnoses result is exceeded by both of the samples for academic problem obtained from four Southern African universities (the two University of the Western Cape samples reported by Naidoo, 1997).

(ii) Objective 3 (patients versus the total student community)

Table 5.2 demonstrates that the usage/utilisation (prevalence) rate for academic problem presenting at the UCT-SHS-MHS is 0,9 per 1 000 students during the study period of 1991 to 1993.

- The UCT-SHS-MHS usage/utilisation (prevalence) rate is exceeded by all three of the samples for academic problem quoted in the literature for developed (first world) countries (Carmen, Zerman and Blaine, 1968, for athlete attendees at Harvard University, USA; Schwarz, 1964, at the University of British Columbia, Canada, and Winer and Dorus, 1972, at the University of Chicago, USA).
- For usage/utilisation (prevalence) rate data, no sample reported the usage/utilisation (prevalence) rate for academic problem for developing (third world) countries.
- The UCT-SHS-MHS usage/utilisation (prevalence) rate is exceeded by both of the samples for academic problem obtained from four Southern African universities (the two University of the Western Cape samples reported by Naidoo, 1997).

In the Literature Review it has been shown that Winer and Dorus (1972) note the mention of academic problems, which affected nearly half their sample, often occurred in the context of another problem, such as a relationship problem. This is a potentially important finding in view of the previously detailed possible additional risk that historically disadvantaged Black students experience of developing relationship problems due to their unique social dynamics. These authors also query whether the frequency of this complaint is related to reasonable needs unmet by the academic programme at the undergraduate level of the University. The role of the University and the UCT Academic Development Programme (ADP) in meeting the needs of its diverse student body are further discussed in the following paragraph. When the educational underpreparedness of local Black students (in particular) is considered it would, in fact, be surprising to discover that nearly half of these students attending Southern African mental health services, if asked, did not express such concerns or dissatisfaction with their academic achievement. Furthermore, Gibbs (1975) notes that academic problems affecting Black students resulted in anxiety or depression which was interfering with the student's ability to perform academic tasks effectively. Most of the students attributed their difficulties to poor high school preparation, poor study habits and lack of self-confidence. This context is certainly extremely relevant within the South African setting.

This probable finding of a potentially high prevalence of academic problem presenting at the UCT-SHS-MHS, which could, no doubt, be extrapolated to the entire student body, should certainly present a significant challenge to the UCT-ADP to successfully meet the needs of such academically challenged students. Indeed, the demands on the UCT-ADP to rectify the negative consequences of apartheid-inspired secondary education will become more pressing as the transformation process initiated by the University further changes the demographics of the student body to more closely reflect that of the country as a whole. If this process is not timeously addressed, there could very well be a sharp increase in these academic problems which could, in turn, lead to much psychological and psychiatric morbidity (as well as possible accompanying somatisation) in these new students. This could then result in severe dissatisfaction amongst this growing sector of the student body with regard to the University's apparent indifference to their distress and eventually culminate in the sort of student unrest that is currently affecting other Southern African tertiary educational institutions.

[Refer to section 6.2.2.3 for details of academic problems diagnosed in Black (African, Coloured and Indian) students attending the UCT-SHS-MHS.]

– Complicated bereavement

(i) Objective 1 (attendees)

Table 5.1 demonstrates that student attendees were assessed by resident professional staff as recording 26 diagnoses of complicated bereavement (or 2,8 per cent of total diagnoses) at the UCT-SHS-MHS during the study period of 1991 to 1993.

- For attendance data, no sample reported the attendance data for (complicated) bereavement for developed (first world) countries.
- For attendance data, no sample reported the attendance data for (complicated) bereavement for developing (third world) countries.
- The UCT-SHS-MHS percentage of total diagnoses result is exceeded by the sample for (complicated) bereavement obtained from four Southern African universities (Naidoo, 1997, for 01-12/95 attendees at the University of the Western Cape).

(ii) Objective 3 (patients versus the total student community)

Table 5.2 demonstrates that the usage/utilisation (prevalence) rate for complicated bereavement presenting at the UCT-SHS-MHS is 1,1 per 1 000 students during the study period of 1991 to 1993.

- For usage/utilisation (prevalence) rate data, no sample reported the usage/utilisation (prevalence) rate for (complicated) bereavement for developed (first world) countries.
- For usage/utilisation (prevalence) rate data, no sample reported the usage/utilisation (prevalence) rate for (complicated) bereavement for developing (third world) countries.
- The UCT-SHS-MHS usage/utilisation (prevalence) rate is exceeded by the sample for (complicated) bereavement obtained from four Southern African universities (Naidoo, 1997, for 01-12/95 attendees at the University of the Western Cape).

There are too few samples quoted in the literature in order to form a meaningful comparison between these UCT-SHS-MHS results for complicated bereavement and circumstances prevailing amongst students attending other colleges and universities elsewhere in the world. However, it is self-evident that this condition could easily result in a major degree of functional impairment which, in turn, could threaten the affected student's academic career. Therefore, such students should be encouraged to seek assistance at the UCT-SHS which may lead to a further referral for evaluation and/or therapeutic intervention at the UCT-SHS-MHS.

– Pre- and post termination counselling for unplanned/unwanted pregnancy

(i) Objective 1 (attendees)

Table 5.1 demonstrates that student attendees were assessed by resident professional staff as recording 28 diagnoses of pre- and post termination counselling for unplanned/unwanted pregnancy (or 3,0 per cent of total diagnoses) at the UCT-SHS-MHS during the study period of 1991 to 1993.

- The UCT-SHS-MHS percentage of total diagnoses result is exceeded by the sample for (pre- and post termination counselling for) unplanned/unwanted pregnancy quoted in the literature for developed (first world) countries (Gibbs, 1975, for Black student attendees at Stanford University, USA).
- For attendance data, no sample reported the attendance data for (pre- and post termination counselling for) unplanned/unwanted pregnancy for developing (third world) countries.
- For attendance data, no sample reported the attendance data for (pre- and post termination counselling for) unplanned/unwanted pregnancy for Southern African countries.

(ii) Objective 3 (patients versus the total student community)

Table 5.2 demonstrates that the usage/utilisation (prevalence) rate for pre- and post termination counselling for unplanned/unwanted pregnancy presenting at the UCT-SHS-MHS is 1,2 per 1 000 students during the study period of 1991 to 1993.

No sample quoted in the literature reported the usage/utilisation (prevalence) rate for (pre- and post termination counselling for) unplanned/unwanted pregnancy.

There are too few samples quoted in the literature in order to form a meaningful comparison between these UCT-SHS-MHS results for pre- and post termination counselling for unplanned/unwanted pregnancy and circumstances prevailing amongst students attending other colleges and universities elsewhere in the world. However, it is self-evident that this condition, as in the case of complicated bereavement as a termination of pregnancy can often be perceived as such, could easily result in a major degree of functional impairment which, in turn, could threaten the affected student's academic career. Therefore, such students should be encouraged to seek assistance at the UCT-SHS which may lead to a further referral for evaluation and/or therapeutic intervention at the UCT-SHS-MHS.

(e) Anxiety (neurotic) disorder

(i) Objective 1 (attendees)

Table 5.1 demonstrates and Figure 5.1 illustrates that student attendees were assessed by resident professional staff as recording 172 diagnoses of anxiety (neurotic) disorder (or 18,7 per cent of total diagnoses) at the UCT-SHS-MHS during the study period of 1991 to 1993.

- The UCT-SHS-MHS percentage of total diagnoses result is exceeded by 21 of the 34 (61,8 per cent) samples for anxiety (neurotic) disorder (or compatible disorders) quoted in the literature for developed (first world) countries.
- The UCT-SHS-MHS percentage of total diagnoses result is exceeded by both of the samples for anxiety (neurotic) disorder (or compatible disorders) quoted in the literature for developing (third world) countries (German and Arya, 1969, at Makerere University College, Uganda, and Wig, Nagpal and Khanna, 1971, at Panjab University, India).
- The UCT-SHS-MHS percentage of total diagnoses result is exceeded by five of the six (83,3 per cent) samples for anxiety (neurotic) disorder (or compatible disorder) obtained from four Southern African universities.

(ii) Objective 3 (patients versus the total student community)

Table 5.2 demonstrates that the usage/utilisation (prevalence) rate for anxiety (neurotic) disorder presenting at the UCT-SHS-MHS is 7,6 per 1 000 students during the study period of 1991 to 1993.

- The UCT-SHS-MHS usage/utilisation (prevalence) rate is exceeded by three of the six (50,0 per cent) samples for anxiety (neurotic) disorder (or compatible disorders) quoted in the literature for developed (first world) countries (Kidd and Caldbeck-Meenan, 1966, at Queen's University of Belfast, UK; Kidd and Caldbeck-Meenan, 1966, at the University of Edinburgh, UK, and Selzer, 1960, at the University of Michigan, USA).
- For usage/utilisation (prevalence) rate data, no sample reported the usage/utilisation (prevalence) rate for anxiety (neurotic) disorder (or compatible disorders) for developing (third world) countries.
- The UCT-SHS-MHS usage/utilisation (prevalence) rate is exceeded by all three of the samples for anxiety (neurotic) disorder (or compatible disorders) obtained from four Southern African universities (Mupunga, 1997, at the University of Zimbabwe, and the two University of the Western Cape samples reported by Naidoo, 1997).

(iii) Objective 4 (mean number of consultations)

Table 5.4 demonstrates that the mean number of consultations for anxiety (neurotic) disorder presenting at the UCT-SHS-MHS is 3,4, consultations per student during the study period of 1991 to 1993.

- The UCT-SHS-MHS mean number of consultations is exceeded by the sample for affective disorder (or compatible disorders) quoted in the literature for developed (first world) countries (Friedman and Coons, 1969, at Indiana University, USA).
- For mean number of consultation data, no sample reported the mean number of consultations for anxiety (neurotic) disorder (or compatible disorders) for developing (third world) countries.
- For mean number of consultation data, no sample reported the mean number of consultations for anxiety (neurotic) disorder (or compatible disorders) for Southern African countries.

In view of the adverse background circumstances affecting historically disadvantaged and educationally underprepared Black students entering an academic environment that is completely foreign to them, it would be expected that Southern African and, to a lesser extent, developing (third world) college/university mental health services would, generally, display both higher percentage of total diagnoses (Objective 1) and usage/utilisation (prevalence) rate per 1 000 students (Objective 3) figures than equivalent facilities serving tertiary educational institutions in developed (first world) countries. These UCT-SHS-MHS results, when compared to the former, suggest that resident psychologists, psychiatrist and medical officers have possibly underdiagnosed anxiety (neurotic) disorders amongst student attendees.

In the Literature Review is has been shown that Dann (1964) notes the incidence of anxiety (neurotic) disorder (as well as psychosomatic disease) tends to decrease relative to the number of students as their numbers rise. The author expresses surprise at this trend since it might well be expected that these disorders would be minimised in a small student community, but would increase as the student community grew and its members became less well known to each other and consequently more isolated. This seemingly anomalous finding could have important implications for UCT which is a tertiary educational institution in the midst of a major transformation process whereby an increasing number of previously marginalized students are being admitted. It is possible that such an increase in their numbers may also cause a decrease in the incidence of anxiety (neurotic) disorders in this group of students as it would present them with an increased opportunity for socialising with each other. However, it would be extremely important to assess the optimal rate for transformation to gauge whether this ongoing process should be accelerated to possibly further reduce student anxieties. On the other hand, such potential advantages should be carefully weighed against the increased demand too rapid transformation would place on the academic structures of the University – especially the UCT Academic Development Programme (ADP) – in order to cater to the needs of these academically underprepared students. This topic has been previously highlighted in the subdivision detailing academic problems.

These anxiety (neurotic) disorders can be responsible for much morbidity within the student community – especially at examination time. Therefore, undiagnosed and untreated anxiety (neurotic) disorders could severely inhibit the affected student's performance during the vital mid-year and end-of-year, especially, examinations. The resultant degree of functional impairment would not have to be especially great for these students to face exclusion from the University on academic grounds as the margin between success and failure is particularly fine for such students labouring under the disadvantage of an educationally underprepared background. In respect of this morbidity within the student community, Sarason (1983) notes that anxiety is a very personal experience that involves anticipations of danger, harm and inability to meet challenges. In the case of test anxiety, these anticipations are linked to evaluational situations. Test anxious people see evaluational situations as difficult, challenging and threatening and themselves as ineffective in coping with academic challenges. These perceptions, for many academically impaired students, are regrettably based on realistic insights and expectations. The author notes that although significant negative correlations are usually reported between test anxiety and academic performance, their magnitude is, however, generally low. The importance of this condition, however, should not be underestimated as Savage (1974) determined that anxiety is, inter alia, one of the factors that lead to underachievement at college/university. Furthermore, Malleson (1957) notes that the fear felt by the student is two-handed: (i) there is a fear of failure, and (ii) there is a fear of the examination itself. Again, for the educationally underprepared student, these fears are extremely well founded.

[Refer to section 6.2.2.3 for details of anxiety (neurotic) disorders diagnosed in Black (African, Coloured and Indian) students attending the UCT-SHS-MHS.]

(f) "Other" disorders

– Personality/character disorder

(i) Objective 1 (attendees)

Table 5.1 demonstrates that student attendees were assessed by resident professional staff as recording 16 diagnoses of personality/character disorder (or 1,7 per cent of total diagnoses) at the UCT-SHS-MHS during the study period of 1991 to 1993.

- The UCT-SHS-MHS percentage of total diagnoses result is exceeded by all 34 samples for personality/character disorder (or compatible disorders) quoted in the literature for developed (first world) countries.
- The UCT-SHS-MHS percentage of total diagnoses result is exceeded by the sample for personality/character disorder (or compatible disorders) quoted in the literature for developing (third world) countries (German and Arya, 1969, at Makerere University College, Uganda).
- The UCT-SHS-MHS percentage of total diagnoses result is exceeded by the sample for personality/character disorder (or compatible disorders) obtained from four Southern African universities (Venter, 1997, at the University of the Free State).

(ii) Objective 3 (patients versus the total student community)

Table 5.2 demonstrates that the usage/utilisation (prevalence) rate for personality/character disorder presenting at the UCT-SHS-MHS is 0,7 per 1 000 students during the study period of 1991 to 1993.

- The UCT-SHS-MHS usage/utilisation (prevalence) rate is exceeded by six of the seven (85,7 per cent) samples for personality/character disorder (or compatible disorders) for developing (third world) countries.
- For usage/utilisation (prevalence) rate data, no sample reported the usage/utilisation (prevalence) rate for personality/character disorder (or compatible disorders) for developing (third world) countries.
- The UCT-SHS-MHS usage/utilisation (prevalence) rate is exceeded by the sample for personality/character disorder (or compatible disorders) obtained from four Southern African universities (Venter, 1997, at the University of the Free State).

In the Literature Review it has been reported that Jones (1972) defines a personality disorder as being present in an individual if any personality trait was sufficiently prominent or absent to cause distress to him/her or to society, provided that this trait was present at least from late adolescence. Swartz, Posin and Kaye (1958) report that the preponderance of evidence is that the symptomatology of personality/character disorder is deep-rooted, fixed and alterable only with considerable long-term treatment. The authors note that short-term therapeutic results cannot be expected in the majority of instances. This observation is relevant to the UCT-SHS-MHS insofar as evaluation and/or therapeutic intervention is generally limited to six sessions which would constitute short-term therapy.

Again, it is possible that resident psychologists, psychiatrist and medical officers may have underdiagnosed personality/character disorder in students presenting at the UCT-SHS-MHS.

However, it is extremely difficult to assess the likely impact of this condition on the student body as it is not only both notoriously difficult to characterise and arduous to treat but it can also produce a wide array of symptoms with varying degrees of functional impairment. Therefore, it is feasible that some students with fairly severe personality/character disorders may be able to succeed in their academic commitments while concurrently suffering from severe interpersonal and social problems which would certainly negatively impact upon their subsequent careers.

– Psychosomatic/psychophysiological disorder

There were no student attendees assessed by resident professional staff as recording this specific disorder at the UCT-SHS-MHS during the study period of 1991 to 1993. This result can be explained by the fact that no such diagnosis is recorded on the UCT-SHS "Patients Stat Details Sheet" rather than the complete absence of this potentially important mental and physical disorder.

In the literature relating to psychosomatic/psychophysiological disorder, there are 11 samples for developed (first world) countries, one sample for developing (third world) countries (Wig, Nagpal and Khanna, 1971, at Panjab University, India), and three samples for Southern African countries (Germond, 1997, at the Medical University of Southern Africa – MEDUNSA – and the two University of the Western Cape samples reported by Naidoo, 1997).

In the Literature Review it has been reported that Dann (1964) notes the incidence of psychosomatic/psychophysiological disorder (as well as anxiety (neurotic) disorder) tends to decrease relative to the number of students as their numbers rise. (This seemingly anomalous finding is further discussed under the subdivision outlining anxiety (neurotic) disorders.) It is important that psychosomatic/psychophysiological disorders presenting at the UCT-SHS are recognised early, especially culture-specific complaints affecting historically disadvantaged Black students. If the underlying psychological basis for these seemingly physical complaints is overlooked, many of these students will repeatedly return to the nursing sister or medical officer requesting treatment. These unnecessary repeat visits for a seemingly incurable condition which, in most cases, would respond to appropriate psychotherapeutic intervention cause these students much distress. If not timeously resolved, this distress could lead to an ever increasing state of agitation and obsession with the presenting medical complaint which would, in turn, inevitably lead to a corresponding decrease in functional ability. Again, as with many other mental disorders causing functional impairment, the impact here is often most severe on historically disadvantaged and educationally underprepared Black students who, ironically, largely because of a cultural background that is, in many ways, at variance with the Eurocentric culture of the University are more prone to developing these disorders.

– Psychotic disorder

(i) Objective 1 (attendees)

Table 5.1 demonstrates that student attendees were assessed by resident professional staff as recording six diagnoses of psychotic disorder (or 0,6 per cent of total diagnoses) at the UCT-SHS-MHS during the study period of 1991 to 1993.

- The UCT-SHS-MHS percentage of total diagnoses result is exceeded by 23 of the 24 (95,8 per cent) samples for psychotic disorder (or compatible disorders) quoted in the literature for developing (third world) countries.
- The UCT-SHS-MHS percentage of total diagnoses result is exceeded by the sample for psychotic disorder (or compatible disorders) quoted in the literature for developing (third world) countries (German and Arya, 1969, at Makerere University College, Uganda).
- The UCT-SHS-MHS percentage of total diagnoses result is exceeded by both of the samples for psychotic disorder (or compatible disorders) obtained from four Southern African universities (Mupunga, 1997, at the University of Zimbabwe, and Naidoo, 1997, for 01-12/95 attendees at the University of the Western Cape).

(ii) Objective 3 (patients versus the total student community)

Table 5.2 demonstrates that the usage/utilisation (prevalence) rate for psychotic disorder presenting at the UCT-SHS-MHS is 0,3 per 1 000 students during the study period of 1991 to 1993.

- The UCT-SHS-MHS usage/utilisation (prevalence) rate is exceeded by all seven samples for psychotic disorder (or compatible disorders) quoted in the literature for developed (first world) countries.
- For usage/utilisation (prevalence) rate data, no sample reported the usage/utilisation (prevalence) rate for psychotic disorder (or compatible disorders) for developing (third world) countries.
- The UCT-SHS-MHS usage/utilisation (prevalence) rate is exceeded by both of the samples for psychotic disorder (or compatible disorders) obtained from four Southern African universities (Mupunga, 1997, at the University of Zimbabwe, and Naidoo, 1997, for 01-12/95 attendees at the University of the Western Cape).

In the Literature Review it was noted that Craig (1972) suggests a relatively high proportion of students who experience psychotic episodes may go unrecognised by the student mental health service until their emotional distress causes them to drop out of the academic system entirely. If this scenario is true, the author recommends that student mental health services must develop much more intensive casefinding programmes if they are to discover these students early enough to prevent their developing full-blown psychoses requiring interruption of their college/university careers, an event which carries a considerable hazard for the student's future career. It is, therefore, important that all professional staff at the UCT-SHS-MHS be made aware of the symptoms of psychotic (schizophrenic) disorder in order to promote early detection of this potentially extremely debilitating condition.

However, these UCT-SHS-MHS results suggest that resident psychologists, psychiatrist and medical officers may well have underdiagnosed psychotic disorder in student attendees. An important consideration for professional staff is, indeed, to recognise the varying presentations – especially in

the early stages – of this condition amongst a culturally diverse student community. It is highly possible that the predominantly White female UCT-SHS-MHS therapists may not be conversant with culture-specific presentations accompanying the initial presentation of this disorder in historically disadvantaged Black students. Appropriate training in cultural sensitisation and/or the introduction of suitably qualified Black therapists would, hopefully, alleviate this unfortunate situation which may be the direct cause of unnecessary illness and impairment in these already academically vulnerable students.

[Refer to section 6.2.2.3 for details of psychotic disorders diagnosed in Black (African, Coloured and Indian) students attending the UCT-SHS-MHS.]

– Sexual disorder

(i) Objective 1 (attendees)

Table 5.1 demonstrates that student attendees were assessed by resident professional staff as recording 10 diagnoses of sexual disorder (or 1,1 per cent of total diagnoses) at the UCT-SHS-MHS during the study period of 1991 to 1993.

- The UCT-SHS-MHS percentage of total diagnoses result is exceeded by 13 of the 14 (92,9 per cent) samples for sexual disorder (or compatible disorders) quoted in the literature for developed (first world) countries.
- For attendance data, no sample reported the attendance data for sexual disorder for developing (third world) countries.
- The UCT-SHS-MHS percentage of total diagnoses result is exceeded by three of the four (75,0 per cent) samples for sexual disorder (or compatible disorders) obtained from four Southern African universities (Germond, 1997, at the Medical University of Southern Africa – MEDUNSA, and the two University of the Western Cape samples reported by Naidoo, 1997).

(ii) Objective 3 (patients versus the total student community)

Table 5.2 demonstrates that the usage/utilisation (prevalence) rate for sexual disorder presenting at the UCT-SHS-MHS is 0,4 per 1 000 students during the study period of 1991 to 1993.

- The UCT-SHS-MHS usage/utilisation (prevalence) rate is exceeded by all four of the samples for sexual disorder (or compatible disorders) for developing (first world) countries.
- For usage/utilisation (prevalence) rate data, no sample reported the usage/utilisation (prevalence) rate for sexual disorder (or compatible disorders) for developing (third world) countries.
- The UCT-SHS-MHS usage/utilisation (prevalence) rate is exceeded by both of the samples for sexual disorder (or compatible disorders) obtained from four Southern African universities (the two University of the Western Cape samples reported by Naidoo, 1997).

In the Literature Review it has been documented that Jones (1972) reports, on the one hand, it was common for male students to present specifically complaining of impotence whereas, on the other hand, it was uncommon for female students to present with frigidity or other sexual problems. The

author notes that this pattern occurred even though sexual attitudes were far more liberal than formerly. However, these findings, he believes, are a reflection of changing social attitudes to sex in which adequate sexual function, irrespective of marital status, is a desirable goal and guilt may be felt if function is inadequate.

The candidate has observed that it would seem self-identity (refer to section 3.1.1), especially in male students, frequently appears to be closely linked to their level of sexual functioning. Therefore, a student suffering from what is often only a minor sexual disorder will consider this condition to be a major threat to his male identity. This situation, not surprisingly, often seems to manifest itself in the subsets of students who are most vulnerable to other psychological or psychiatric complaints – consequently historically disadvantaged Black students appear to be particularly prone to present at the UCT-SHS and/or UCT-SHS-MHS with various sexual disorders. Although not a serious or life-threatening complaint, this condition may be sufficiently severe to impair a student's academic functioning – the impact of this impairment again being potentially most severe for these educationally underprepared Black students.

[Refer to sections 6.2.2.2 and 6.2.2.3 for details of sexual disorders diagnosed in male students and Black (African, Coloured and Indian) students, respectively, attending the UCT-SHS-MHS.]

– Eating disorders

(i) Objective 1 (attendees)

Table 5.1 demonstrates that student attendees were assessed by resident professional staff as recording 25 diagnoses of eating disorders (five for anorexia nervosa or 0,5 per cent of total diagnoses, and 20 for bulimia or 2,2 per cent of total diagnoses to combine as 2,7 per cent of total diagnoses) at the UCT-SHS-MHS during the study period of 1991 to 1993.

- The UCT-SHS-MHS percentage of total diagnoses result is exceeded by both of the samples for eating disorders quoted in the literature for developed (first world) countries (Rosecan, Goldberg and Wise, 1992, at Georgetown University, USA, and Stangler and Printz, 1980, at the University of Washington, USA).
- For attendance data, no sample reported the attendance data for eating disorders for developing (third world) countries.
- The UCT-SHS-MHS percentage of total diagnoses result is exceeded by both of the samples for eating disorders obtained from four Southern African universities (the two University of the Western Cape samples reported by Naidoo, 1997).

(ii) Objective 3 (patients versus the total student community)

Table 5.2 demonstrates that the usage/utilisation (prevalence) rate for eating disorders presenting at the UCT-SHS-MHS is 1,1 per 1 000 students (0,2 per 1 000 for anorexia nervosa and 0,9 per 1 000 for bulimia) during the study period of 1991 to 1993.

- The UCT-SHS-MHS usage/utilisation (prevalence) rate is exceeded by only one of the two (50,0 per cent) samples for eating disorders quoted in the literature for developed (first world) countries (Stangler and Printz, 1980, at the University of Washington, USA).
- For usage/utilisation (prevalence) rate data, no sample reported the usage/utilisation (prevalence) rate for eating disorders for developing (third world) countries.
- The UCT-SHS-MHS usage/utilisation (prevalence) rate is exceeded by both of the samples for eating disorders obtained from four Southern African universities (the two University of the Western Cape samples reported by Naidoo, 1997).

There are too few samples quoted in the literature in order to form a meaningful comparison between these UCT-SHS-MHS results for eating disorders and circumstances prevailing amongst students attending other colleges and universities elsewhere in the world. However, it is self-evident that this condition, which predominantly affects White female students, could not only result in a major degree of functional impairment but could also easily become a life-threatening illness. Therefore, it is essential that students who are suffering from either anorexia nervosa or bulimia must seek assistance at the UCT-SHS which would, in all likelihood, lead to a further referral for evaluation and/or therapeutic intervention at either the UCT-SHS-MHS or, if the condition is more severe, at Groote Schuur Hospital.

[Refer to sections 6.2.2.2 and 6.2.2.3 for details of eating disorders diagnosed in female students and White students, respectively, attending the UCT-SHS-MHS.]

– Substance abuse disorders

(i) Objective 1 (attendees)

Table 5.1 demonstrates that student attendees were assessed by resident professional staff as recording 10 diagnoses of substance abuse disorders (nine for alcohol abuse or 1,0 per cent of total diagnoses and one for drug abuse of 0,1 per cent of total diagnoses to combine as 1,1 per cent of total diagnoses) at the UCT-SHS-MHS during the study period of 1991 to 1993.

- The UCT-SHS-MHS percentage of total diagnoses result is exceeded by all three of the samples for substance abuse disorders quoted in the literature for developed (first world) countries (Braaten and Darling, 1961, at Cornell University, USA; Hersch, Nazario and Backus, 1983, at the University of Massachusetts, USA, and Winer and Dorus, 1972, at the University of Chicago, USA).
- For attendance data, no sample reported the attendance data for substance abuse disorders for developing (third world) countries.
- The UCT-SHS-MHS percentage of total diagnoses result is exceeded by all three of the samples for substance abuse disorders obtained from four Southern African universities (Mupunga, 1997, at the University of Zimbabwe and the two University of the Western Cape samples reported by Naidoo, 1997).

(ii) Objective 3 (patients versus the total student community)

Table 5.2 demonstrates that the usage/utilisation (prevalence) rate for substance abuse disorders presenting at the UCT-SHS-MHS is 0,4 per 1 000 students (0,4 per 1 000 for alcohol abuse and 0,04 for drug abuse) during the study period of 1991 to 1993.

- The UCT-SHS-MHS usage/utilisation (prevalence) rate is exceeded by the sample for substance abuse disorders quoted in the literature for developed (first world) countries (Winer and Dorus, 1972, at the University of Chicago, USA).
- For usage/utilisation (prevalence) rate data, no sample reported the usage/utilisation (prevalence) rate for substance abuse disorders for developing (third world) countries.
- The UCT-SHS-MHS usage/utilisation (prevalence) rate is exceeded by all three of the samples for substance abuse disorders obtained from four Southern African universities (Mupunga, 1997, at the University of Zimbabwe and the two University of the Western Cape samples reported by Naidoo, 1997).

Yet again, it is possible that resident psychologists, psychiatrist and medical officers may have underdiagnosed substance abuse disorders in students presenting at the UCT-SHS-MHS. As these conditions often tend to run a chronic and relapsing course, there is frequently considerable functional impairment involved in students suffering from either alcohol dependency and/or drug addiction. Therefore, these students should be encouraged to seek assistance at the UCT-SHS which may lead to a further referral for evaluation and/or therapeutic intervention at either the UCT-SHS-MHS or, if the illness is more severe, at Groote Schuur or William Slater Hospital. As with sexual disorder, these disorders also, hardly surprisingly, tend to manifest themselves in the subsets of students who are most vulnerable to other psychological or psychiatric complaints – hence historically disadvantaged Black students, from UCT-SHS-MHS attendances, do appear to be particularly prone to suffer from these substance abuse disorders.

[Refer to section 6.2.2.3 for details of substance abuse disorders diagnosed in Black (African, Coloured and Indian) students attending the UCT-SHS-MHS.]

(g) Summary

(i) Objective 1 (attendees)

On the one hand these UCT-SHS-MHS results, bearing in mind the introductory comments, suggest that affective disorder (especially compared to other Southern African universities), relationship problem, family problem, academic problem, anxiety (neurotic) disorder (especially compared to other developing (third world) and Southern African universities), personality/character disorder, psychotic disorder, sexual disorder, eating disorders and substance abuse disorders either: (i) appear, relative to other presenting complaints, to be a far less important condition amongst University of Cape Town students than it is in students attending other college/university mental health services elsewhere in the world (Objective 1 comparisons), or (ii) it is a disorder that is grossly underdiagnosed by resident psychologists, psychiatrist and medical officers amongst

UCT-SHS-MHS attendees (both Objective 1 and Objective 3 comparisons). The latter would, therefore, seem to be a distinct possibility.

On the other hand, these UCT-SHS-MHS results, again bearing in mind the introductory comments, suggest that adjustment disorder, unlike the above disorders, appears relative to other presenting complaints, to be a far more important condition amongst University of Cape Town students than it is in students attending other college/university mental health services elsewhere in the world (Objective 1). This finding, which is confirmed by a generally raised usage/utilisation (prevalence) rate per 1 000 students (Objective 3), is hardly surprising when consideration is taken of the considerable adjustment that is required of, especially, historically disadvantaged Black students who derive from a culture that is completely foreign to that of a predominantly Eurocentric university.

However, there are too few samples quoted in the literature in order to form a meaningful comparison between these UCT-SHS-MHS results for V-codes, complicated bereavement and pre- and post termination counselling for unplanned/unwanted pregnancy and circumstances prevailing amongst students attending other colleges and universities elsewhere in the world.

(ii) Objective 3 (patients versus the total student community)

It is an extremely noteworthy finding that the UCT-SHS-MHS reported near universally lower usage/utilisation (prevalence) rates for all individual diagnoses – with the notable exception of adjustment disorder – than those recorded at other college/university mental health services in both developed (first world) and Southern African countries (neither of the developing (third world) country samples provided usage/utilisation (prevalence) rates). The reason for this finding could be that: (i) there is a clearly lower prevalence of mental disorders – with the exception of adjustment disorder – within the University of Cape Town student body; (ii) UCT students are not ready to acknowledge the presence and/or seriousness of these conditions when present; (iii) students with these mental disorders are reluctant to attend the UCT-SHS-MHS for the required evaluation and/or therapeutic intervention – there is, however, no other facility at the University that offers a professional counselling service, or (iv) some students might seek assistance elsewhere (e.g. the more affluent students might attend private mental health facilities or historically disadvantaged Black students might visit a traditional healer). The initial suggestion would seem to be the least plausible, bearing in mind the major adjustment that a major sector of the student body must undergo in order to pursue a tertiary education. There is probably an element of truth in the second suggestion, with the result that it is the duty of the UCT-SHS-MHS to educate these students about not only the symptoms but also the hidden dangers of mental illness. The third suggestion raises important questions about not only the accessibility but also the appropriateness and user-friendliness of the UCT-SHS-MHS and the service it provides to the total student community. These issues will be addressed in the specific recommendations (refer to section 6.4).

(iii) Objective 4 (mean number of consultations)

It is not a meaningful exercise to compare the mean number of consultations recorded at the UCT-SHS-MHS for the major diagnostic categories with those appearing in the single sample quoted in the Literature Review (Friedman and Coons, 1969, at Indiana University, USA) as it is not possible to discuss the significance of the local findings in relation to a single set of incomplete comparisons – V-codes and selected "other" disorders were not included in this subsection due to the absence of any comparative figures for the vast majority of these complaints. Nevertheless, the UCT-SHS-MHS figures for both affective disorder and anxiety (neurotic) disorder (the only major diagnostic categories recording results in the comparative sample) were less than those documented at the Indiana University mental health service.

6.2.2 Demographic Variables

6.2.2.1 Gender

Research Hypothesis Ia

Female students are more likely to present with mental disorders at the UCT-SHS-MHS than males.

Research Hypothesis Ib

Female students are likely to require more consultations for mental disorders at the UCT-SHS-MHS than males.

(a) Objective 1 (attendees)

(i) Patient-specific data

The following results were previously detailed in section 5.1.2.1:

- Table 5.7 demonstrates that there was a greater number of female students than male students (by 40,1 per cent) who attended the UCT-SHS-MHS from 1991 to 1993.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.3.1:

- This result is in agreement with only 11 of the 38 (28,9 per cent) gender-specific samples quoted in the literature for developed (first world) countries.
- This result is in agreement with none of the three gender-specific samples quoted in the literature for developing (third world) countries.
- This result is in agreement with two of the four (50,0 per cent) gender-specific samples obtained from four Southern African universities (the two University of the Western Cape samples reported by Naidoo, 1997).

It must be noted that the above gender-specific results for UCT-SHS-MHS student attendees (patients) are descriptive statistics presented according to the number of student attendees, per se, rather than according to usage/utilisation rates per 1 000 students as used in Objective 3 which compares attendees to the total student community. Therefore, this finding of a greater number of female student attendees could be a factor related to the composition of the University of Cape Town student population rather than necessarily the demonstration of a student subset in great need of psychotherapeutic intervention – although, in this case, student demographics would not explain this phenomenon.

This UCT-SHS-MHS result reporting a greater number of female student attendees would appear to most closely resemble the samples obtained from the other Southern African universities. Possible reasons for this include: (i) many of the developed (first world) country samples involve college/university mental health services studies conducted in the 1960's and 1970's and, consequently, reflect an era when males rather than females were expected and encouraged to attend tertiary educational institutions; (ii) fewer female students attend colleges and universities in developing (third world) countries, and (iii) the Southern African studies are not only closest in proximity to the University of Cape Town but they are also, on the whole, most contemporaneous with the date of the UCT-SHS study.

(ii) Clinical/diagnostic-specific data

The following results were previously detailed in section 5.1.2.1:

- Table 5.8 demonstrates that the above predominance of female students was not maintained for all five major diagnostic categories with notable exceptions being anxiety (neurotic) disorder (tied) and "other" disorders – including the individual entities of psychotic disorder, sexual disorder and substance abuse – as well as the individual V-code of academic problem. All of these disorders produced statistically significant (p=0,011; 0,000; 0,037; 0,002; 0,027 and 0,002, respectively) results in favour of male students while adjustment disorder and V-codes – including the entities of relationship problem, family problem and pre- and post termination counselling for unplanned/unwanted pregnancy as well as the "other" disorder of eating disorders (bulimia) produced statistically significant (p=0,041; 0,000; 0,017; 0,022; 0,000 and 0,000, respectively) in favour of female students.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.3.1:

- In the literature for developed (first world) countries and the single sample for Southern African countries (Germond, 1997, at the Medical University of Southern Africa – MEDUNSA):
  - the UCT-SHS-MHS male and female percentage of total diagnoses results are both exceeded by the majority of gender-specific samples for affective disorder (including the MEDUNSA sample), anxiety (neurotic) disorder (including the MEDUNSA sample), personality/character disorder, psychotic disorder and sexual disorder.
    This result suggests that these disorders are either: (i) less prevalent in students attending the UCT-SHS-MHS than they are in other college/university mental health services, or (ii) selectively underdiagnosed by UCT-SHS-MHS therapists.
  - the UCT-SHS-MHS male and female percentage of total diagnoses results are both not exceeded by the majority of gender-specific samples for only adjustment disorder.

This result suggests that these disorders are either: (i) more prevalent in students attending the UCT-SHS-MHS than they are in other college/university mental health services (most likely scenario), or (ii) selectively overdiagnosed by UCT-SHS-MHS therapists (least likely scenario).

This result is somewhat unexpected as males are generally required by society to be stoic and not display weakness by openly expressing their fears. However, the very act of suppressing these often prominent emotions, which are the direct result of interacting with a foreign and, for many students, highly threatening environment, rather than seeking the support of their peers frequently only serves to accentuate the severity of the problem. In addition, male students are frequently subject to increased family expectations of success so that any academic setback can often be accompanied by heightened feelings of anxiety. This could also help to explain the increased number of self-acknowledged academic problems affecting these students. The comparatively raised number of male presentations of psychotic disorders may, inter alia, be related to them displaying the type of behaviour that may more easily draw attention to their illness amongst either their peers or University staff with whom they come into frequent contact. Obviously strange behaviour would lead to a referral to either the UCT-SHS-MHS or, if aggression or other threatening behaviour is involved, to Groote Schuur Hospital Casualty Department for evaluation and/or therapeutic intervention. The increased likelihood of male students to present with sexual disorders has previously been addressed in the relevant subdivision of section 6.2.1.2(e) while the increased prevalence of substance abuse amongst males has also been documented by other local studies (e.g. Flisher, 1996). Therefore, these results confirm that males are more likely than females to indulge in various forms of high risk behaviour – from possible sexual promiscuity to alcohol and drug abuse. The significant overrepresentation of all these disorders in male students further highlights their importance and the role they may play in disrupting these students' university careers.

It is noteworthy that adjustment disorders are statistically significantly overrepresented in female students (while anxiety (neurotic) disorders are correspondingly somewhat overrepresented in their male peers) which would suggest that these students are either likely to present with more classical symptoms of this disorder than their male peers or, for whatever reasons, resident psychologists, psychiatrist and medical officers are more likely to identify adjustment disorders in female students and anxiety (neurotic) disorders in male students presenting at the UCT-SHS-MHS. This is an interesting finding that requires further investigation. The statistically significant overrepresentation of several V-codes in female students may reflect their susceptibility to these psychosocial conditions which, although not psychological disorders themselves, may be associated with mental illness. Possibly females would generally appear to be the victims rather than instigators of breakdowns in interpersonal relationships – this scenario would be consistent with the often sexually predatory nature of, especially historically disadvantaged, male students (refer to the relevant subdivision of section 6.2.1.2(f) for further details of this hypothesis which has been generated from the candidate's personal observations). Such a scenario may also be liable to result in further family problems if the student's parents strongly disapprove of her partner and his behaviour. Another reason for the overrepresentation of these interpersonal relationship problems in female students is that they may feel less inhibited or embarrassed about discussing them with a professional than their male peers who may consider such an action as a sign of weakness. The reason for pre- and post termination counselling for

unplanned/unwanted pregnancy is self-evident although it is regrettable that more males did not seem prepared to support their partners by accompanying them to attend the counselling sessions. Eating disorders are known to affect predominantly female students so that the complete absence of any male presentations is not unexpected.

(b) Objective 2 (patients versus controls)

The following results were previously detailed in section 5.1.2.1:

- Table 5.9 demonstrates that female students are statistically more likely than male students to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS. This finding confirms Research Hypothesis Ia of the UCT-SHS study.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.3.1:

- No sample quoted in the literature employed medical controls stratified by gender and reported findings in the format employed in the UCT-SHS study (also refer to section 6.1.1.1(b)).

The above confirmation of Research Hypothesis Ia of the UCT-SHS study suggests that, amongst UCT-SHS attendees, female students were significantly more likely than male students to use the mental health service. There are at least two possible explanations for this finding: (i) a potentially greater knowledge of the psychotherapeutic process and its benefits exists amongst the female student community, or (ii) female students might find the psychotherapeutic process less threatening than their male peers.

(c) Objective 3 (patients versus the total student community)

(i) Patient-specific data

The following results were previously detailed in section 5.1.2.1:

- Table 5.10 demonstrates that female students are, again, statistically more likely than male students to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than their representation of the student community would suggest. This finding confirms Research Hypothesis Ia of the UCT-SHS study. Likewise, Table 5.11 demonstrates and Figure 5.4 illustrates that the usage/utilisation rate per 1 000 students is 94,3 per cent higher for female students at 54,4 compared to 28,0 for males.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.3.1:

- No sample quoted in the literature employed non-mental health services attendees within the total student community as a set of controls stratified by gender and reported findings in the format employed in the UCT-SHS study (also refer to section 6.1.1.1(c)). However, usage/utilisation rates per 1 000 students stratified by gender were reported in the literature:
  - This raised female usage/utilisation rate is in agreement with 20 of the 23 (87,0 per cent) gender-specific samples quoted in the literature for developed (first world) countries. In the literature relating to female usage/utilisation

rates, only 10 of the 23 (43,5 per cent) samples reported rates in excess of that recorded at the UCT-SHS-MHS from 1991 to 1993. On the other hand, in the literature detailing male usage/utilisation rates, 17 of the 23 (73,9 per cent) samples recorded rates greater than that documented at the UCT-SHS-MHS.

- This raised female usage/utilisation rate is not in agreement with the gender-specific sample quoted in the literature for developing (third world) countries. This study (German and Arya, 1969, at Makerere University College, Uganda) reports a slightly lower female usage/utilisation rate (47,1) but records a substantially higher male rate (95,7).
- This raised female usage/utilisation rate is in agreement with both of the gender-specific samples obtained from four Southern African universities (the two University of the Western Cape samples reported by Naidoo, 1997). Both these samples document considerably higher usage/utilisation rates for female (74,0 and 57,8) as well as male (46,3 and 40,6) students.

The above confirmation of Research Hypothesis Ia of the UCT-SHS study suggests that most of the observations made in section 3.3.2.1 of the Literature Review concerning possible reasons for increased female student usage of the mental health service were well founded. Therefore, these results suggest that:

(i) female students (especially those from a historically disadvantaged background) are often subject to ongoing gender discrimination arising from gender stereotyping practised by their communities. Consequently, these female students might be less likely to receive family acceptance and support in their pursuit of a tertiary education than their male peers. This lack of support, together with pre-existing gender stereotyping might, indeed, predispose these students to role conflict and resultant adjustment disorders and/or affective disorders and/or anxiety disorders, and

(ii) female students (again especially those from a historically disadvantaged background) are often subject to the added responsibility of caring for dependent children with (too) little support from their families. This dual responsibility of child rearing (which is, in itself, a time consuming and labour intensive task) and studying (which is another time consuming and labour intensive task) places increased pressure on these female students which might, indeed, also predispose these students to role conflict and resultant adjustment disorders and/or affective disorders and/or anxiety disorders.

In addition, it has been reported in the Literature Review that female students feel more free than men to use college/university mental health services as male students may still feel inhibited in using such services due to a sense of social stigma (Dunn et al., 1980). Likewise, Braaten and Darling (1961) suggest that: (i) females have a lower threshold for referral than males, and (ii) girls are given more sanction than boys to acknowledge emotional problems. Therefore, the differential willingness to admit to distress and the reluctance to seek out a dependency relationship may explain at least part of the consistent finding that females have higher levels of psychiatric (mental health services) utilisation than males (Anderson and Anderson, 1972). A further factor to consider is the fact that academic competition in education places an extra strain on women attending college/university due to the possible conflict between the traditional female image in society and the (emerging) professional role of women (Binger, 1961). This conflict may contribute to a greater need for psychiatric assistance among female students.

– Objective 2 versus Objective 3

It is notable that both Objectives 2 and 3 of the gender-specific variable recorded statistically significant findings in favour of female students. These results suggest that females are both more likely to seek therapeutic intervention at the UCT-SHS-MHS than make use of the medical facilities provided by the UCT-SHS and to selectively present at the UCT-SHS-MHS with psychological or psychiatric complaints. The most likely reason for this finding is either that these students are not particularly prone to physical complaints or, probably, that they have a greater understanding of the psychotherapeutic process than their male peers who, on the other hand, are somewhat unaware and unsure of the potential benefits to be derived from this process (refer above).

(ii) Clinical/diagnostic-specific data

The following results were previously detailed in section 5.1.2.1:

- Tables 5.12 and 5.13 demonstrate that the above raised usage/utilisation rate per 1 000 students for female students was not maintained for all five major diagnostic categories with notable exceptions being "other" disorders – including the individual entities of psychotic disorder, sexual disorder and substance abuse disorder – as well as the individual V-code of academic problem.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.3.1:

- In the literature for developed (first world) countries:
  - the UCT-SHS-MHS usage/utilisation (prevalence) rate for both male and female students are both exceeded by the majority of gender-specific samples for anxiety (neurotic) disorder, personality/character disorder and psychotic disorder.
    This result suggests that these disorders are either: (i) less prevalent in the total UCT student community than they are in other tertiary educational institutions, or (ii) students affected by them do not present at the UCT-SHS-MHS for treatment.
  - the UCT-SHS-MHS usage/utilisation (prevalence) rate for both male and female students are both not exceeded by the majority of gender-specific samples for any documented disorder.
    This result suggests that no disorder is more prevalent in the total UCT student community than it is in other tertiary educational institutions.

The possible reasons for the increased prevalence of these disorders in male students have already been documented in Objective 1.

(d) Objective 4 (mean number of consultations)

The following results were previously detailed in section 5.1.2.1:

- Table 5.14 demonstrates that the mean number of consultations is statistically higher for female students than male students (by 20,6 per cent) who attended the UCT-SHS-MHS from 1991 to 1993. This finding confirms Research Hypothesis Ib of the UCT-SHS study.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.3.1:

- This raised female mean number of consultations is in agreement with two of the four (50,0 per cent) gender-specific samples quoted in the literature for developed (first world) countries (Friedman and Coons, 1969, at Indiana University, USA, and Gibbs, 1975, for Black student attendees at Stanford University, USA). In the literature relating to mean number of female consultations, only two of the four (50,0 per cent) samples reported a mean in excess of that recorded at the UCT-SHS-MHS from 1991 to 1993 (Dunn et al., 1980, at the College Mental Health Center, Boston, USA, and Gibbs, 1975, for non-Black student attendees at Stanford University, USA). Conversely, in the literature detailing male mean number of consultations, three of the four (75,0 per cent) samples documented means greater than that recorded at the UCT-SHS-MHS.
- For mean number of consultation data, no sample reported the gender-specific mean number of consultations for developing (third world) countries.
- For mean number of consultation data, no sample reported the gender-specific mean number of consultations for Southern African countries.

The above confirmation of Research Hypothesis Ib of the UCT-SHS study suggests that female students were either: (i) suffering from significantly more severe psychopathology than males; (ii) displaying a significantly increased resistance to the therapeutic intervention employed; (iii) requiring a significantly greater need for reinforcement, or (iv) being subject to a greater range of dependency issues than their male peers. An alternative explanation is that female students could have been using their increased knowledge of the therapeutic process (refer to Objective 2) to more fully explore their presenting complaint.

– Objective 3 versus Objective 4

There is an association between the usage/utilisation rate per 1 000 students and the mean number of consultations required for male versus female students.

(e) Comparisons to Gelman's study

Gelman (1999) in her study of students attending the UCT-SHS between 26 June 1998 and 11 July 1998, describes, in Table 6.3, the same relationship between male and female students for the prevalence of minor psychiatric morbidity (MPM) in students attending the UCT-SHS for medical or emotional complaints (comparisons between this sample and that employed in this research have previously been detailed in the corresponding subdivision in section 6.2.1.1 which documents results for overall student attendees) as that previously detailed in Objective 3 of the gender-specific variable for usage/utilisation rates per 1 000 students of the UCT-SHS-MHS. Extrapolation of Gelman's results to the total student community would suggest that as many as 385,5 per 1 000 female students are affected by less severe forms of minor psychiatric morbidity (SRQ ≥8) while 60,2 per 1 000 are subject to more severe forms of minor psychiatric morbidity (SRQ ≥15).

Table 6.3 Relationship between MPM (minor psychiatric morbidity) and gender in students (N = 515) attending the UCT-SHS between 26 June 1998 and 11 July 1998 (adapted from Gelman, 1999).

(a) SRQ <8 versus SRQ ≥8								
Gender	**SRQ[1] <8**		**SRQ[1] ≥8**		**Unadjusted OR (with 95% CI)**	**Df**	**χ^2**	**p**
	n	**%**	**n**	**%**				
Males	130	38,9	53	29,3	1,5 (1,0 - 2,3)	1	4,8	$0,029^{Sig}$
Females	204	61,1	128	70,7	-	-	-	-
Total	334	100,0	181	100,0	-	-	-	-
(b) SRQ <15 versus SRQ ≥15								
Gender	**SRQ[1] <15**		**SRQ[1] ≥15**		**Unadjusted OR (with 95% CI)**	**Df**	**χ^2**	**p**
	n	**%**	**n**	**%**				
Males	177	36,2	6	23,1	1,9 (0,7 - 5,4)	1	1,9-	$0,173^{NS}$-
Females	312	63,8	20	76,.9	-	-	-	-
Total	489	100,0	26	100,0	-	-	-	-

[1]Self-Reporting Questionnaire (SRQ – 25).

Section 6.1.2.2 has previously highlighted limitations with interpretation of UCT-SHS data – especially issues involving the generalisability of UCT-SHS data or attendees to community-based student patterns. Gelman's sample, despite being subject to the same methodological problems would, nevertheless, appear to offer a further indirect indicator of minor psychiatric morbidity within the total UCT student community. This sample would therefore serve as a local adjunct to the figures, quoted in section 3.1.3.4(e)(iv), proposed by Segal (1966) in a review article comparing the findings from five studies of college/university populations in the USA. Therefore, the number of female students attending the University of Cape Town during 1991 to 1993 who are likely to be affected by minor psychiatric morbidity is as follows:

(i) Gelman's figures

- SRQ set at a value of ≥15 corresponds to a prevalence of 60,2 per 1 000 of 9 706 female students affected by more severe forms of minor psychiatric morbidity which equals 584 female students. However, there were 528 female student attendees at the UCT-SHS-MHS during the study period which leaves a SURPLUS of 56 female students.
- SRQ set at a value of ≥8 corresponds to a prevalence of 385,5 per 1 000 of 9 706 female students affected by less severe forms of minor psychiatric morbidity which equals 3 742 female students. However, there were 528 female student attendees at the UCT-SHS-MHS during the study period which leaves a DEFICIT of 3 214 female students.

(ii) Segal's figures

- Proposed prevalence of 75,0 per 1 000 (as, according to the author, "at least 7 or 8 per cent of students are almost certainly fairly seriously emotionally disturbed") of 9 706 female students affected by minor psychiatric morbidity which equals 728 female students. However, there were 528 female student attendees at the UCT-SHS-MHS during the study period which leaves a DEFICIT of 200 female students.
- Proposed prevalence of 150,0 per 1 000 (as, according to the author, "there are strong grounds for assuming that the total proportion is almost twice as high" as the above figure) of 9 706 female students affected by minor psychiatric morbidity which equals 1 456 female students. However, there were 528 female student attendees at the UCT-SHS-MHS during the study period which leaves a DEFICIT of 928 female students.

These figures suggest that female students, who represent the gender-specific subset within the total student community, as measured by usage/utilisation rate per 1 000 students, most likely to present at the UCT-SHS-MHS with psychological or psychiatric complaints, would appear amenable to seeking professional assistance for more serious mental illness. This is suggested – but cannot be confirmed – by the surplus recorded by female student attendees in Gelman's study for SRQ values in excess of or equal to 15. However, it would also seem that there is still some reticence among these students to seek evaluation and/or therapeutic intervention for less severe complaints as indicated by the fairly substantial deficit between attendees and SRQ values greater than or equal to 8. Likewise, Segal's results, obtained from a developed (first world) country, suggest that only 36,3 per cent of "fairly seriously emotionally disturbed" students will attend the UCT-SHS-MHS. (Further discussion concerning possible limitations in interpreting this finding which relates to the total UCT student community has previously been outlined in the corresponding subdivision in section 6.2.1.1 which documents results for overall student attendees.)

– Concluding comments

There are certain limitations in both extrapolating Gelman's UCT-SHS attendee-specific findings to the total UCT student community and comparing them to the UCT-SHS-MHS-specific results detailed in Chapter 5 of this research work. The extrapolation is potentially biased by the fact that it is NOT possible to surmise the proportions of students who seek assistance for their underlying mental disorders at either: (i) no health care facility (i.e. do not seek treatment); (ii) a private health care facility, or (iii) a government health care facility (e.g. Groote Schuur Hospital Psychiatry Outpatients Department). The validity of the comparison is potentially affected by the fact that it is not possible to ascertain whether all the patients presenting at the UCT-SHS-MHS for evaluation and/or therapeutic intervention during the study period were actually subject to minor psychiatric morbidity as assessed by, inter alia, the SRQ instrument employed by Gelman in her study. It would, however, appear to represent an appropriate belief to assume that the vast majority of these UCT-SHS-MHS attendees were indeed affected by some degree of psychiatric morbidity to precipitate their presentation.

6.2.2.2 Race/population group

Research Hypothesis IIa

Black students are more likely to present with mental disorders at the UCT-SHS-MHS than White students.

Research Hypothesis IIb

Black students are likely to require more consultations for mental disorders at the UCT-SHS-MHS than White students.

(a) Objective 1 (attendees)

(i) Patient-specific data

The following results were previously detailed in section 5.1.2.2:

- Table 5.15 demonstrates that, in the non-abridged format, White students were the most frequent attendees at the UCT-SHS-MHS from 1991 to 1993 followed by African, Coloured and Indian students.
- Table 5.17 demonstrates that, in the abridged format, there was a greater number of White students than Black (African, Coloured and Indian) students (by 11,4 per cent) who attended the UCT-SHS-MHS from 1991 to 1993.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.3.2:

- As the non-abridged race/population group-specific format employed in the UCT-SHS study is unique to this country and its apartheid legacy, it is not possible to meaningfully compare these results to those reported in other countries that have a totally different demographic distribution (viz. developed (first world) countries have a predominantly White population while developing (third world) countries, in turn, generally have either a predominantly African or Asian population).
- The abridged format result is in agreement with all six race/population group-specific samples quoted in the literature for developed (first world) countries.
- The abridged format result is not in agreement with the race/population group-specific sample quoted in the literature for developing (third world) countries (German and Arya, 1969, at Makerere University College, Uganda).
- The abridged format result is not in agreement with the race/population group-specific sample obtained from four Southern African universities (Mupunga, 1997, at the University of Zimbabwe).

It must be noted that the above race/population group-specific results for UCT-SHS-MHS student attendees (patients) are descriptive statistics presented according to the number of student attendees, per se, rather than according to usage/utilisation rates per 1 000 students as used in Objective 3 which compares attendees to the total student community. Therefore, this finding of a greater number of White student attendees could be a factor related to the composition of the University of Cape Town student population rather than necessarily the demonstration of a student subset in great need of psychotherapeutic intervention.

(ii) Clinical/diagnostic-specific data

The following results were previously detailed in section 5.1.2.2:

- Table 5.16 demonstrates that, in the non-abridged format, the above predominance of White students was maintained for all five major diagnostic categories with notable exceptions being the individual V-codes of complicated bereavement (tied with African students), pre- and post termination counselling for unplanned/unwanted pregnancy and academic problem (tied with African students) as well as the selected "other" disorders of psychosis, alcohol abuse and sexual dysfunction. Of the above, only anxiety (neurotic) disorder and family problem produced statistically significant (p=0,016 and 0,004, respectively) results together with the selected "other" disorder of substance abuse (p=0,015).

- Table 5.18 demonstrates that, in the abridged format, the above predominance of White students was not maintained for all five major diagnostic categories with notable exceptions being V-codes – including all individual entities – and anxiety (neurotic) disorder as well as the selected "other" disorders of psychotic disorder, sexual disorder and substance abuse disorder. Of the above, only V-codes, anxiety (neurotic) disorder and sexual disorder produced statistically significant (p=0,006; 0,010 and 0,035, respectively) results in favour of Black students while only "other" disorders including the individual entity of bulimia produced statistically significant (p=0,000 and 0,004, respectively) in favour of White students.

The following are apparent when the above results are compared to the samples for developed (first world) countries previously documented in section 3.3.3.2:

- The UCT-SHS-MHS Black and White, where available, percentage of total diagnoses results are both exceeded by the race/population group-specific samples for affective disorder, relationship problem, family problem (White figures not available), academic problem, pre- and post termination counselling for unplanned/unwanted pregnancy (White figures not available), sexual disorder (White figures not available) (Gibbs, 1975, at Stanford University, USA), personality/character disorder and psychotic disorder (White figures not available) (Alston, 1974, at New York University, USA.

  This result suggests that these disorders are either: (i) less prevalent in students attending the UCT-SHS-MHS than they are in the above college/university mental health services, or (ii) selectively underdiagnosed by UCT-SHS-MHS therapists.
- The UCT-SHS-MHS Black and White percentage of total diagnoses results are both not exceeded by the race/population group-specific samples for adjustment disorder (Alston, 1974, at New York University, USA).
- This result suggests that these disorders are either: (i) more prevalent in students attending the UCT-SHS-MHS than they are in the above college/university mental health services (most likely scenario), or (ii) selectively overdiagnosed by UCT-SHS-MHS therapists (least likely scenario).

These results are not entirely unexpected as historically disadvantaged and educationally underprepared Black (mainly African) students must find the experience of attending a Eurocentric tertiary educational institution that is often not only far removed from their home, but also far removed from their cultural background, to be a highly daunting experience. The obvious accompaniment of such stress would be a variety of anxiety (neurotic) disorders which would be the inevitable result of this arduous adjustment process. It is surprising, however, that more adjustment disorders, per se, were not recorded by resident psychologists, psychiatrist and medical officers amongst students presenting at the UCT-SHS-MHS. The reasons for this are unclear although the diagnostic practice of choosing the predominant symptom complex/major diagnostic category in favour of linking both diagnoses may play a role – although such a cross-linkage would provide useful shorthand aetiological cues on the "Patients Stat Details Sheet" – or, for other unknown reasons, either therapist or client has been unwilling to investigate or acknowledge, respectively, the underlying cause of the presenting anxiety (neurotic) disorder.

V-codes are usually viewed as a collection of psychosocial conditions which, although not psychological disorders themselves, may accompany mental illness. In view of the generally adverse social circumstances affecting these students – not only consequent upon their disadvantaged backgrounds but also their often profoundly problematic adjustment to University life – such a universal increase in these V-codes would be

anticipated. For example, the background stress of pursuing a tertiary education in these students would clearly contribute to strained interpersonal relationships, thereby leading to both relationship (especially) and family problems. Academic problems due to their educationally underprepared state would also be a natural ongoing accompaniment to their university careers. Complicated bereavement could be due to a combination of the often violent home environment from which these students derive, where loved ones could easily become victim to social unrest, coupled with the underlying distress of a more troubled and less successful than anticipated University experience which could make them additionally vulnerable to the effects of this personal loss. Pre- and post termination counselling for unplanned/unwanted pregnancy could be the result of a complex social and psychological interaction whereby, on the one hand, female students might feel socially obliged – in order to initially form and subsequently maintain stable relationships in a seemingly threatening and lonely environment where friendship is at a premium – to acquiesce to their male partners' sexual demands without an adequate knowledge and understanding of appropriate contraceptive methods. On the other hand, male students might feel equally obliged to initiate such intimate relationships because of a threatened self-identity – due to the same threatening and potentially humiliating environment where success is at a premium – feel the need to exert themselves in a sexual way in order to compensate for rapidly diminishing levels of self-esteem. (This hypothesis, which has been generated from the candidate's personal observations, is further discussed in the relevant subdivision of section 6.2.1.2(f).) If any problem, no matter how comparatively insignificant, were to interfere with these male students' sexual function, they would feel further threatened as they would no longer have this alternative mechanism, albeit somewhat inappropriate, to boost their self-esteem. This further blow to their already fragile self-confidence could, although not necessarily, lead to other compensatory but self-destructive behaviour such as substance abuse which is often characterised by episodes of binge drinking. Psychotic behaviour, which can often be characterised by a series of fairly florid culturally appropriate presenting complaints, may also be the ultimate consequence of such prolonged and severe stress in the absence of a culturally sensitive support structure.

Obviously, appropriate steps should be instituted by relevant University authorities so that historically disadvantaged Black students affected by various adjustment-related problems to University life could receive ongoing assistance before they develop any of these often imminently preventable and debilitating mental disorders or adopt potentially dangerous and self-destructive behaviour whose consequences could affect them long after the completion of their university careers. The statistically significant overrepresentation of anxiety (neurotic) disorder – the initiating factor in the above scenario – and sexual disorder – another factor near the climax of the above scenario – in Black students further highlights the importance of these conditions.

On the other hand, eating disorders are regarded as being predominantly White female orientated conditions which are still largely foreign to the Black culture – although the appearance of these disorders amongst, albeit a low number of, African female students would suggest that certain traditionally Western values have either become or are becoming imprinted on local Black students.

(b) Objective 2 (patients versus controls)

The following results were previously detailed in section 5.1.2.2:

- Tables 5.19 and 5.24 demonstrate that, in the non-abridged format, only Coloured students (conventional format) and Coloured versus White students (matrix format) are statistically more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS while only African students (conventional format) and African versus Coloured students (matrix format) are statistically less likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS.
- Table 5.26 demonstrates that, in the abridged format, Black (African, Coloured and Indian) students are not statistically more likely than White students to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS. This finding rejects Research Hypothesis IIa of the UCT-SHS study.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.3.2:

- No sample quoted in the literature employed medical controls stratified by race/population group and reported findings in the format employed in the UCT-SHS study (also refer to section 6.1.1.1(b)).

The above rejection of Research Hypothesis IIa of the UCT-SHS study suggests that amongst UCT-SHS attendees, Black students were not statistically more likely than White students to use the mental health service. There are at least two possible explanations for this finding: (i) a potentially inferior knowledge of the psychotherapeutic process and its benefits exists amongst the Black student community; (ii) Black students might find the psychotherapeutic process more threatening than their White peers, or (iii) there may be a greater stigma attached to emotional and mental disorders amongst the Black student community.

(c) Objective 3 (patients versus the total student community)

(i) Patient-specific data

The following results were previously detailed in section 5.1.2.2:

- Tables 5.20 and 5.25 demonstrate that, in the non-abridged format, only African students (conventional format) and African versus Coloured, Indian and White students and Coloured versus White students (matrix format) are statistically more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS while only White students (conventional format) are statistically less likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS. Likewise, Table 5.21 demonstrates and Figure 5.7 illustrates that the usage/utilisation rate per 1 000 students is highest for African students (80,1) followed by Coloured, Indian and White students (41,3; 37,9 and 30,9, respectively).
- Table 5.27 demonstrates that, in the abridged format, Black (African, Coloured and Indian) students are statistically more likely than White students to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than their representation of the student community would suggest. This finding

confirms Research Hypothesis IIa of the UCT-SHS study. Likewise, Table 5.28 demonstrates and Figure 5.8 illustrates that the usage/utilisation rate per 1 000 students is 92,7 per cent higher for Black students at 58,2 compared to 30,2 for Whites.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.3.2:

- No sample quoted in the literature employed non-mental health services attendees within the total student community as a set of controls stratified by race/population group and reported findings in the format employed in the UCT-SHS study (also refer to section 6.1.1.1(c)). However, usage/utilisation rates per 1 000 students stratified by race/population group were reported in the literature:
  - No samples reported in the Literature Review recorded their findings according to the non-abridged race/population group classification employed in the UCT-SHS study which is unique to this country and its apartheid legacy.
  - The raised Black student usage/utilisation rate, in the abridged format, is in agreement with only one of the four (25,0 per cent) race/population group-specific samples quoted in the literature for developed (first world) countries (Gibbs, 1975, for attendees for the 1969/70 academic year at Stanford University, USA). In the literature relating to Black student usage/utilisation rates, three of the four (75,0 per cent) samples reported rates in excess of that recorded at the UCT-SHS-MHS from 1991 to 1993. Likewise, in the literature detailing White student usage/utilisation rates, the same three samples recorded rates greater than that documented at the UCT-SHS-MHS.
  - For usage/utilisation rate data, no sample reported the race/population group-specific usage/utilisation rate per 1 000 students for developing (third world) countries.
  - For usage/utilisation rate data, no sample reported the race/population group-specific usage/utilisation per 1 000 students for Southern African countries.

It is clearly apparent that, in the non-abridged format, the respective usage/utilisation rates per 1 000 students recorded by the individual race/population groups would appear to mirror the perceived hierarchy of historical (dis)advantage existing under the previous dispensation (i.e. it is generally acknowledged that, as a rule, Africans were most severely affected and marginalized by the apartheid regime followed by the Coloured and Indian population groups who were, again as a rule, perceived to be somewhat less disadvantaged by this process than the former). The candidate does, however, recognise that this form of generalisation is not only unscientific, but could also give rise to offence.

The above confirmation of Research Hypothesis IIa of the UCT-SHS study suggests that most of the observations made in section 3.3.2.2 of the Literature Review concerning possible reasons for increased Black student usage of the mental health service were well founded. Therefore, these results suggest that:

(i) the Black student (in both socio-economic and, more relevantly, academic spheres) has to struggle much harder than his/her (generally) historically advantaged White peers in order to meet the diverse academic challenges and demands of university life. Struggling with the consequences of an inferior education and coping (or not coping) to adapt to these demanding academic requirements must, indeed, lead to potentially serious adjustment problems to the University, and

(ii) the Black student is often subject to increased social and familial responsibilities – frequently including younger siblings, dependent consorts and children who might reside upcountry away from them – than their more affluent (on average) White counterparts. Shouldering these added responsibilities with often extremely limited financial resources, support structures and inadequate domestic facilities must, indeed, lead to potentially serious adjustment problems to the University. In addition, these Black students who comprise a minority of the total (undergraduate) student community are often considerably older than their peers and, consequently, may find it difficult to relate to them. This could result in diminished interaction with fellow students and a feeling of alienation that does not, however, appear to predispose these students to affective disorders.

In addition, it has been documented in the Literature Review that Mackey (1972) observes newly arrived minority group students (in the USA, who correspond to historically disadvantaged Black students in South Africa) represent a population at high risk who are subject to intense adjustment problems on a strange new campus, and for some of them, a frightening new world. The magnitude of the adjustment process required of many local Black students to meet the exacting demands of a Eurocentric university that is entirely foreign to their cultural background has been repeatedly highlighted throughout this research work. However, this group of students tend to under-utilise resource facilities. This may be due to the fact that Black students felt that it was inappropriate to discuss personal adjustment issues with mental health services staff (Johnson, 1977; Walter and Miles, 1981). Carey and Swartz (1971) report that where the demands of Black students for an increasing number of Black counsellors and therapists have been met, there are suggestions that minority students have been less reluctant to come to traditional mental health facilities for assistance. This finding might well have great relevance for the predominantly White staffed UCT-SHS-MHS whose therapists are generally ignorant of local culture-specific norms relevant to the African student body. The absence of such knowledge must not only negatively impact on both the diagnostic and therapeutic skills offered at the UCT-SHS-MHS but also substantially reduce the credibility of the whole psychotherapeutic process for these students. Such a situation would obviously lead many African students to seek alternative, more culture-sensitive venues for relief of their symptoms.

– Objective 2 versus Objective 3

It is meaningful that, in the abridged format, Objective 2 of the race/population group-specific variable did not record a statistically significant finding while Objective 3 did report one in favour of Black (African, Coloured and Indian) students. The most likely reason for this somewhat anomalous finding is that Black (predominantly African) students, possibly on the basis of cultural factors, may be more likely to somatise their psychological or psychiatric complaints and, thereby, attend the UCT-SHS for various psychosomatic/psychophysiological disorders rather than the UCT-SHS-MHS for their underlying mental disorder. On the other hand, White students, generally being more aware of the psychological basis of certain physical complaints, may be more likely to directly approach the UCT-SHS-MHS for evaluation and/or therapeutic intervention. Therefore, several of the African students attending the UCT-SHS for seemingly purely physical complaints should rather be seen by

the resident psychologists or psychiatrist at the UCT-SHS-MHS for optimal treatment of their presenting symptoms. Indeed, the resident nursing sisters or medical officers would, in all likelihood, fail to recognise the true aetiology of many of these conditions with the result that many of these students would receive inadequate and often sub-optimal treatment for these remediable complaints. Such failed treatment would not only lead to obvious dissatisfaction in the level of service provided to these African students but would also cause continuing morbidity which could adversely affect their academic performance and, thereby, jeopardise their university careers.

(ii) Clinical/diagnostic-specific data

The following results were previously detailed in section 5.1.2.2:

- Tables 5.22 and 5.23 demonstrate that, in the non-abridged format, the above raised usage/utilisation rate per 1 000 students for African students was maintained for all five major diagnostic categories and the selected "other" disorders with a notable exception being the individual V-code of family problem.
- Tables 5.29 and 5.30 demonstrate that, in the abridged format, the above raised usage/utilisation rate per 1 000 students for Black students was maintained for all five major diagnostic categories and individual V-codes although notable exceptions within the selected "other" disorders were personality/character disorder and eating disorders.

This result, which is somewhat surprising, could possibly be due to the fact that resident psychologists, psychiatrist and medical officers are not able to correctly diagnose the presence of various personality/character disorders in Black (especially African) students presenting at the UCT-SHS-MHS as their classical presentation may be clouded by local culture-appropriate manifestations. Detection of these disorders which, if left untreated, could produce much impairment could be substantially improved if the UCT-SHS-MHS therapists were to receive further training in common indigenous psychological and psychiatric presentations. Indeed, the presence of appropriately trained Black therapists would not only further enhance this process but would also improve the representivity of the UCT-SHS-MHS in the eyes of these students. As stated in Objective 1, eating disorders, on the other hand, are known to predominantly affect White female students.

(d) Objective 4 (mean number of consultations)

The following results were previously detailed in section 5.1.2.2:

- Table 5.31 demonstrates that, in the non-abridged format, there was no significant difference between the race/population groups for the mean number of consultations with Coloured students requiring the greatest mean number of consultations (4,2) at the UCT-SHS-MHS from 1991 to 1993 followed by White, African and Indian students (4,0; 3,4 and 3,3, respectively).
- Table 5.33 demonstrates that, in the abridged format, the mean number of consultations is higher for White students than Black (African, Coloured and Indian) students (by 11,1 per cent) who attended the UCT-SHS-MHS from 1991 to 1993. This finding rejects Research Hypothesis IIb of the UCT-SHS study.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.3.2:

- No sample reported in the Literature Review documented their findings according to the non-abridged race/population group classification employed by the UCT-SHS study which is unique to this country and its apartheid legacy.
- The lowered Black student mean number of consultations, in the abridged format, is in agreement with neither of the two race/population group-specific samples quoted in the literature for developed (first world) countries (Gibbs, 1975, at Stanford University, USA, and Alston, 1974, at New York University, USA). In the literature relating to mean number of Black and non-Black student consultations, only one sample reported in excess of that recorded at the UCT-SHS-MHS from 1991 to 1993 (Gibbs, 1975, at Stanford University, USA).
- For mean number of consultation data, no sample reported the race/population group-specific mean number of consultations for developing (third world) countries.
- For mean number of consultation data, no sample reported the race/population group-specific mean number of consultations for Southern African countries.

The above rejection of Research Hypothesis IIb of the UCT-SHS study suggests that Black students were not either: (i) suffering from more severe psychopathology than White students; (ii) displaying an increased resistance to the therapeutic intervention employed; (iii) requiring a greater need for reinforcement, or (iv) being subject to a greater range of dependency issues than their White peers. A possible alternative explanation is that Black students could have been impeded by their decreased knowledge of the therapeutic process (refer to Objective 2) to prevent them from fully exploring their presenting complaint.

However, Alston (1974) notes that the significantly higher number of consultations required by minority students in his study group in the USA could indicate that: (i) more reinforcement and greater reassurance were necessary for them, or (ii) their stresses and problems were greater and they, therefore, were more likely to need repeated help. The important point, the author observes, is that there is consequently no indication that minority students were discouraged by the experience of psychotherapeutic intervention any more than non-minority students as their utilisation of the mental health service, as measured by returns for service, was greater than the non-minority students. This situation would not appear to agree with the findings of the UCT-SHS study.

– Objective 3 versus Objective 4

It is notable that, in the non-abridged format, unlike the example of usage/utilisation rate per 1 000 students, the mean number of consultations figures do not mirror the perceived hierarchy of historical (dis)advantage existing under the previous dispensation (refer above). Therefore, this finding would suggest that socio-economic status, as assessed by the proxy measure of race/population group under the apartheid dispensation, does not appear to affect the level of intervention required (as measured by length of psychotherapy received) for mental disorders presenting at the UCT-SHS-MHS although it does clearly seem to be linked to the actual prevalence of these conditions within the student body. The reason for this apparent anomaly – as it would seem somewhat contradictory to assume that the

majority of these disorders are minor complaints that can easily be rectified by minimal intervention – is unclear and should be further investigated. This would ensure that historically disadvantaged African students receive optimal attention for their presenting psychological or psychiatric complaints which, if inadequately or inappropriately treated, could persist, leading to sufficiently severe academic impairment as to threaten their University careers.

In the abridged format, there is no association between usage/utilisation rate per 1 000 students and the mean number of consultations required for Black versus White students.

(e) Comparisons to Gelman's study

Gelman (1999), in her study of students attending the UCT-SHS between 26 June 1998 and 11 July 1998, describes the same hierarchical relationship between the different race/population groups (except that Coloured and Indian students were combined into a single category due to low sample numbers) for sense of adjustment to the University (Table 6.4), sense of coping academically at the University (Table 6.5) and sense of coping financially at the University (Table 6.6) as that previously detailed in Objective 3 of the race/population group-specific variable for usage/utilisation rates per 1 000 students of the UCT-SHS-MHS. This is the same hierarchy that has been described, above, as mirroring the relative level of (dis)advantage existing amongst the various race/population groups under the previous dispensation. Therefore these results, obtained from a self-administered questionnaire, provide yet further important confirmation of the candidate's initial clinical observation that students from historically disadvantaged (and educationally underprepared) backgrounds, especially African students, appeared to be more predisposed to present at the UCT-SHS with certain mental disorders than students from advantaged backgrounds.

These results – although they do not all produce statistically significant results – serve to, at least, partially reinforce the explanatory comments appearing throughout this research concerning, inter alia, the major adjustment that is required of these students to attend a tertiary educational institution that is totally foreign to their culture, the serious consequences of their self-acknowledged inferior education on their University experience and the adverse psychological effects of financial deprivation. These three areas of concern addressed by Gelman are all important aetiological factors in the development of mental disorders that may or may not present at the UCT-SHS-MHS. Extrapolation of these results to the total student community would suggest that 116,4 per 1 000 African students have failed to adjust to the predominantly Eurocentric culture of the University, 162,7 per 1 000 African students are struggling to meet the exacting academic demands of the University and a phenomenal 595,2 per 1 000 African students are subject to financial problems and, probably, a host of stress-related disorders secondary to these economic concerns. Many of the latter group of students are probably receiving UCT-administered financial aid and thereby represent the subset of students who recorded the highest usage/utilisation rate per 1 000 students in the abridged/highly abridged format (100,3). Therefore there appears to be a clear and unequivocal association between the presence of these financial problems and attendance at the UCT-SHS-MHS for psychological or psychiatric complaints. Such students can be expected to contribute an increasing proportion of UCT-SHS-MHS

attendees as the University continues with its transformation process to enhance the representivity of the student body by registering an increasing number of disadvantaged students.

Table 6.4 Relationship between race/population group and sense of adjustment to the University of Cape Town in students (N = 515) attending the UCT-SHS between 26 June 1998 and 11 July 1998 (adapted from Gelman, 1999).

Race/population group[1]	Yes		No		Unadjusted OR (with 95% CI)	Df	χ^2	p
	n	%	n	%				
Africans	258	58,4	34	70,8	0,6 (0,3 – 1,2)	1	2,8	$0,095^{NS}$
Coloureds/Indians	55	12,4	6	12,5	1,0 (0,4 – 2,8)	1	0,0	$0,991^{NS}$
[Blacks (A,C,I)	313	70,8	40	83,3	0,5 (0,2 – 1,1)	1	3,4	$0,066^{NS}$]
Whites	129	29,2	8	16,7	2,1 (0,9 – 4,9)	1	3,4	$0,066^{NS}$
Total	442	100,0	48	100,0	-	2	3,6	$0,169^{NS}$

Number of missing responses = 25.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.

Table 6.5 Relationship between race/population group and sense of coping academically at the University of Cape Town in students (N = 515) attending the UCT-SHS between 26 June 1998 and 11 July 1998 (adapted from Gelman, 1999).

Race/population group[1]	Yes		No		Unadjusted OR (with 95% CI)	Df	χ^2	p
	n	%	n	%				
Africans	247	58,1	48	73,8	0,5 (0,3 - 0,9)	1	5,8	$0,016^{Sig}$
Coloureds/Indians	50	11,8	8	12,3	1,0 (0,4 - 2,3)	1	0,0	$0,900^{NS}$
[Blacks (A,C,I)	297	69,9	56	86,1	0,4 (0,2 - 0,8)	1	7,5	$0,006^{Sig}$]
Whites	129	30,1	9	13,8	2,7 (1,3 - 6,0)	1	7,4	$0,006^{Sig}$
Total	425	100,0	65	100,0	-	2	7,7	$0,022^{Sig}$

Number of missing responses = 25.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.

Table 6.6 Relationship between race/population group and sense of coping financially at the University of Cape Town in students (N = 515) attending the UCT-SHS between 26 June 1998 and 11 July 1998 (adapted from Gelman, 1999).

Race/population group[1]	Yes		No		Unadjusted OR (with 95% CI)	Df	χ^2	p
	n	%	n	%				
Africans	117	42,5	172	81,9	0,2 (0,1 - 0,3)	1	76,6	$0,000^{Sig}$
Coloureds/Indians	40	14,5	20	9,5	1,6 (0,9 - 3,0)	1	2,8	$0,096^{NS}$
[Blacks (A,C,I)	157	57,0	192	91,4	0,1 (0,1 - 0,2)	1	69,6	$0,000^{Sig}$]
Whites	118	42,9	18	8,6	8,0 (4,6 - 14,3)	1	69,6	$0,000^{Sig}$
Total	275	100,0	210	100,0	-	2	83,5	$0,000^{Sig}$

Number of missing responses = 30.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.

The final all-important indicator obtained by Gelman, detailed in Table 6.7, relates to the prevalence of minor psychiatric morbidity (MPM) in students attending the UCT-SHS for medical or emotional complaints. (Comparisons between this sample and that employed in this research work have previously been detailed in the corresponding subdivision in section 6.2.1.1 which documents results for overall student attendees.) Extrapolation of Gelman's results to the total student community would suggest that as many as 304,1 per 1 000 African students are affected by less severe forms of minor psychiatric morbidity (SRQ ≥8) while 57,4 per 1 000 are subject to more severe forms of minor psychiatric morbidity (SRQ ≥15). The former less

severe conditions display the same race/population group-specific hierarchy as the findings documented in Tables 6.4, 6.5 and 6.6 while, somewhat surprisingly, the latter more severe conditions deviate from this schema insofar as Coloured and Indian students record a lower OR (and a correspondingly higher prevalence rate) than their African peers. It is difficult to explain this anomalous finding in view of these other results which clearly suggest that African students are subject to a greater range of concerns than their Coloured, Indian and White peers. Possible methodological problems relating to sampling procedures adopted may have contributed to the above contradictory finding. This particular result constitutes an issue that requires further investigation – the assessment of whether and, if confirmed, why Coloured and Indian students represent subsets within the total student community who are predisposed to develop more severe underlying psychiatric morbidity. It must be noted that both the less severe and, especially, the more severe forms of minor psychiatric morbidity within these sectors of the student body may lead to functional impairment severe enough to threaten these students' academic careers.

Table 6.7 Relationship between MPM (minor psychiatric morbidity) and race/population group in students (N=515) attending the UCT-SHS between 26 June 1998 and 11 July 1998 (adapted from Gelman, 1999)

(a) SRQ <8 versus SRQ ≥8								
Race/population group[1]	SRQ[2] <8		SRQ[2] ≥8		Unadjusted OR (with 95% CI)	Df	χ^2	p
	n	%	n	%				
Africans	206	58,9	90	62,5	0,9 (0,6 - 1,3)	1	0,6	$0,453^{NS}$
Coloureds/Indians	43	12,3	18	12,5	1,0 (0,5 - 1,8)	1	0,0	$0,948^{NS}$
[Blacks (A,C,I)	249	71,2	108	75,0	0,8 (0,5 - 1,3)	1	0,8	$0,384^{NS}$]
Whites	101	28,9	36	25,0	1,2 (0,8 - 1,9)	1	0,8	$0,384^{NS}$
Total	350	100,0	144	100,0	-	2	0,8	$0,678^{NS}$
(b) SRQ <15 versus SRQ ≥15								
Race/population group[1]	SRQ[2] <15		SRQ[2] ≥15		Unadjusted OR (with 95% CI)	Df	χ^2	p
	n	%	n	%				
Africans	279	59,5	17	68,0	0,7 (0,3 - 1,7)	1	0,7	$0,397^{NS}$
Coloureds/Indians	56	11,9	5	20,0	0,5 (0,2 - 1,7)	1	1,4	$0,233^{NS}$
[Blacks (A,C,I)	335	71,4	22	88,0	0,3 (0,1 - 1,2)	1	3,3	$0,071^{NS}$]
Whites	134	23,6	3	12,0	2,9 (0,8 - 12,5)	1	3,3	$0,071^{NS}$
Total	469	100,0	25	100,0	-	2	3,9	$0,143^{NS}$

Number of missing responses = 21.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
[2]Self-Reporting Questionnaire (SRQ – 25).

Section 6.1.2.2 has previously highlighted limitations with interpretation of UCT-SHS data – especially issues involving the generalisability of UCT-SHS data or attendees to community-based student patterns. Gelman's sample, despite being subject to the same methodological problems would, nevertheless, appear to offer a further indirect indicator of minor psychiatric morbidity within the total UCT student community. This sample would therefore serve as a local adjunct to the figures, quoted in section 3.1.3.4(e)(iv), proposed by Segal (1966) in a review article comparing the findings from five studies of college/university populations in the USA. Therefore, the number of African students attending the University of Cape Town during 1991 to 1993 who are likely to be affected by minor psychiatric morbidity is as follows:

(i) Gelman's figures

- SRQ set at a value of ≥15 corresponds to a prevalence of 57,4 per 1 000 of 3 382 African students affected by more severe forms of minor psychiatric morbidity which equals 194 African students. However, there were 271 African student attendees at the UCT-SHS-MHS during the study period which leaves a SURPLUS of 77 African students.
- SRQ set at a value of ≥8 corresponds to a prevalence of 304,1 per 1 000 of 3 382 African students affected by less severe forms of minor psychiatric morbidity which equals 1 028 African students. However, there were 271 African student attendees at the UCT-SHS-MHS during the study period which leaves a DEFICIT of 757 African students.

(ii) Segal's figures

- Proposed prevalence of 75,0 per 1 000 (as, according to the author, "at least 7 or 8 per cent of students are almost certainly fairly seriously emotionally disturbed") of 3 382 African students affected by minor psychiatric morbidity which equals 254 African students. However, there were 271 African student attendees at the UCT-SHS-MHS during the study period which leaves a SURPLUS of 17 African students.
- Proposed prevalence of 150,0 per 1 000 (as, according to the author, "there are strong grounds for assuming that the total proportion is almost twice as high" as the above figure) of 3 382 African students affected by minor psychiatric morbidity which equals 508 African students. However, there were 271 African student attendees at the UCT-SHS-MHS during the study period which leaves a DEFICIT of 237 African students.

These figures suggest that African students, who represent the race/population group-specific subset within the total student community, as measured by usage/utilisation rate per 1 000 students, most likely to present at the UCT-SHS-MHS with psychological or psychiatric complaints, would appear amenable to seeking professional assistance for more serious mental illness. This is suggested – but cannot be confirmed – by the surplus recorded by African student attendees in Gelman's study for SRQ values in excess of or equal to 15. However, it would also seem that there is still some reticence among these students to seek evaluation and/or therapeutic intervention for less severe complaints as indicated by the fairly substantial deficit between attendees and SRQ values greater than or equal to 8. This finding is compatible with the Objective 2-specific result previously reported for African students in this research work. Likewise, Segal's results, obtained from a developed (first world) country, suggest that only 53,3 per cent of "fairly seriously emotionally disturbed" students will attend the UCT-SHS-MHS. (Further discussion concerning possible limitations in interpreting this finding which relates to the total UCT student community has previously been outlined in the corresponding subdivision in section 6.2.1.1 which documents results for overall student attendees).

– Concluding comments

There are certain limitations in both extrapolating Gelman's UCT-SHS attendee-specific findings to the total UCT student community and comparing them to the UCT-SHS-MHS-specific results detailed in Chapter 5 of this research work. The extrapolation is potentially biased by the fact that it is NOT possible to surmise the proportions of students who seek assistance for their underlying mental disorders at either: (i) no health care facility (i.e. do not seek treatment); (ii) a private health care facility, or (iii) a government health care facility (e.g. Groote Schuur Hospital Psychiatry Outpatients

Department). The validity of the comparison is potentially affected by the fact that it is not possible to ascertain whether all the patients presenting at the UCT-SHS-MHS for evaluation and/or therapeutic intervention during the study period were actually subject to minor psychiatric morbidity as assessed by, inter alia, the SRQ instrument employed by Gelman in her study. It would, however, appear to represent an appropriate belief to assume that the vast majority of these UCT-SHS-MHS attendees were indeed affected by some degree of psychiatric morbidity to precipitate their presentation.

6.2.2.3 Race/population group and gender

Research Hypothesis Ia [stratified by race/population group]

Female students are more likely to present with mental disorders at the UCT-SHS-MHS than males.

Research Hypothesis IIa [stratified by gender]

Black students are more likely to present with mental disorders at the UCT-SHS-MHS than White students.

Research Hypothesis Ib [stratified by race/population group]

Female students are likely to require more consultations for mental disorders at the UCT-SHS-MHS than males.

Research Hypothesis IIb [stratified by gender]

Black students are likely to require more consultations for mental disorders at the UCT-SHS-MHS than White students.

(a) Objective 1 (attendees)

(i) Patient-specific data

The following results were previously detailed in section 5.1.2.3:

- Table 5.34 demonstrates that, in the non-abridged format, White female students were responsible for the greatest number of attendees at the UCT-SHS-MHS from 1991 to 1993 followed by White males, African males, African females, Coloured females, Coloured males, Indian females and Indian male students.
- Table 5.35 demonstrates that, in the abridged format, there was a greater number of: (i) Black (African, Coloured and Indian) male students than Black female students (by 22,1 per cent); (ii) White female students than White male students (by 69,5 per cent); (iii) Black male students than White male students (by 13,0 per cent); (iv) White female students than Black female students (by 31,6 per cent); (v) White female students than Black male students (by 50,0

per cent), and (vi) Black female students than White male students (by 28,8 per cent) who attended the UCT-SHS-MHS from 1991 to 1993.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.3.3:

- As the non-abridged race/population group-specific format employed in the UCT-SHS study is unique to this country and its apartheid legacy, it is not possible to meaningfully compare these results to those reported in other countries that have a totally different demographic distribution (viz. developed (first world) countries have a predominantly White population while developing (third world) countries, in turn, generally have either a predominantly African or Asian population). In addition, no other sample reported in the Literature Review documented their findings according to this detailed race/population group and gender classification.
- In the abridged format, results (i), (ii), (iii) and (vi) are not in agreement while results (iv) and (v) are in agreement with the race/population group and gender-specific sample quoted in the literature for developed (first world) countries (Gibbs, 1975, at Stanford University, USA).
- For attendance data, no sample reported the race/population group and gender-specific attendances for developing (third world) countries.
- For attendance data, no sample reported the race/population group and gender-specific attendances for Southern African countries.

It must be noted that the above race/population group and gender-specific results for UCT-SHS-MHS student attendees (patients) are descriptive statistics presented according to the number of student attendees, per se, rather than according to usage/utilisation rates per 1 000 students as used in Objective 3 which compares attendees to the total student community. Therefore, these findings for Black race/population group of a greater number of Black female student attendees, for White race/population group of a greater number of White female student attendees, for male gender of a greater number of Black male student attendees and for female gender of a greater number of White female student attendees could be a factor related to the composition of the University of Cape Town student population rather than necessarily the demonstration of a student subset in great need of psychotherapeutic intervention – although, in the case of either female or Black student attendees, student demographics would not explain this phenomenon.

(ii) Clinical/diagnostic-specific data

The following results were previously detailed in section 5.1.2.3:

A: Black male students versus Black female students

- Tables 5.38 and 5.42 demonstrate that the above predominance of Black male students was only maintained for the two major diagnostic categories of anxiety (neurotic) disorder and "other" disorders as well as the individual V-code of academic problem. Only V-codes including the individual entity of pre- and post termination counselling for unplanned/unwanted pregnancy produced statistically significant (p=0,000 and 0,016, respectively) results in favour of Black female students while only anxiety (neurotic) disorder, "other" disorders and the individual V-code of

academic problem produced statistically significant (p=0,010; 0,000 and 0,000, respectively) results in favour of Black male students.

The gender-specific variable recorded statistically significant results for the same conditions in male students (as "other" disorders were not further investigated for the combined variable of race/population group and gender, it is not possible to assess whether psychotic disorder, sexual disorder and substance abuse disorders retained their statistically significant findings in Black male students). Therefore, Black race/population group would not appear to fundamentally affect the profile of psychological or psychiatric complaints affecting male students insofar as these Black students are less likely (and the remaining White students, therefore, correspondingly more likely) to present with no individual disorder at the UCT-SHS-MHS. This finding is not compatible with the race/population group-specific results previously detailed in section 6.2.2.2(a)(ii) so that male gender did appear to exert a profound effect on mental disorders presenting in Black students.

On the other hand, the gender-specific variable also reported statistically significant results for adjustment disorder and the individual V-codes of relationship problem and family problem in female students (as "other" disorders were not further investigated for the combined variable of race/population group and gender, it is not possible to assess whether eating disorders (bulimia) retained their statistically significant findings in Black female students). Therefore, unlike the case of males above, Black race/population group would appear to fundamentally affect the profile of psychological or psychiatric complaints affecting female students insofar as these Black students are less likely (and the remaining White students, therefore, correspondingly more likely) to present with adjustment disorder and the individual V-codes of relationship problem and family problem at the UCT-SHS-MHS. This finding is only partly compatible (adjustment disorder) with the race/population group-specific results previously detailed in section 6.2.2.2(a)(ii) so that female gender did appear to exert some effect (although not as prominent as male gender above) on mental disorders presenting in Black students.

(Also refer to section 6.2.2.1(a)(ii) for further details of the possible rationale behind gender-specific findings.)

B: White male students versus White female students

- Tables 5.39 and 5.43 demonstrate that, in the abridged format, the above predominance of White female students was not maintained for all five major diagnostic categories with notable exceptions being "other" disorders and the individual V-code of academic problem. Both these diagnoses produced statistically significant (p=0,001 and 0,013, respectively) results in favour of White male students.

The gender-specific variable also recorded a statistically significant result for anxiety (neurotic) disorder in male students (as "other" disorders were not further investigated for the combined variable of race/population group and gender, it is not possible to assess whether psychotic disorder, sexual disorder and substance abuse disorders retained their statistically significant findings in White male students). Therefore, White

race/population group (unlike Black race/population group above) would appear to somewhat affect the profile of psychological or psychiatric complaints affecting male students insofar as these White students are less likely (and the remaining Black students, therefore, correspondingly more likely) to present with anxiety (neurotic) disorder at the UCT-SHS-MHS. This finding is compatible with the race/population group-specific results previously detailed in section 6.2.2.2(a)(ii) so that male gender would appear to exert little or no effect on mental disorders presenting in White students.

It is highly noteworthy that the gender-specific variable also reported statistically significant results for several diagnoses such as adjustment disorder and V-codes including the individual entities of relationship problem, family problem and pre- and post termination counselling for unplanned/unwanted pregnancy in female students (as "other" disorders were not further investigated for the combined variable of race/population group and gender, it is not possible to assess whether eating disorders (bulimia) retained their statistically significant findings in White female students). Therefore, White race/population group (even more than Black race/population group above) would appear to profoundly affect the profile of psychological or psychiatric complaints affecting female students insofar as these White students are less likely (and the remaining Black students, therefore, correspondingly more likely) to present with adjustment disorder and V-codes including the individual entities of relationship problem, family problem and pre- and post termination counselling for unplanned/unwanted pregnancy at the UCT-SHS-MHS. This finding is also compatible with the race/population group-specific results previously detailed in section 6.2.2.2(a)(ii) so that female gender would appear to exert little or no effect on mental disorders presenting in White students.

(Also refer to section 6.2.2.1(a)(ii) for further details of the possible rationale behind gender-specific findings.)

C: Black male students versus White male students

- Tables 5.36 and 5.40 demonstrate that, in the abridged format, the above predominance of Black male students was not maintained for all five major diagnostic categories with notable exceptions being affective disorder and "other" disorders as well as the individual V-codes of relationship problem and pre- and post termination counselling for unplanned/unwanted pregnancy. Only anxiety (neurotic) disorder produced a statistically significant (p=0,011) result in favour of Black male students while only "other" disorders produced a statistically significant (p=0,029) result in favour of White male students.

The race/population group-specific variable also recorded a statistically significant result for V-codes in Black students (as "other" disorders were not further investigated for the combined variable of race/population group and gender, it is not possible to assess whether sexual disorder retained its statistically significant finding in Black male students) as well as a predominance for the individual V-codes of relationship problem and pre- and post termination counselling for unplanned/unwanted pregnancy but not for adjustment disorder. Therefore, male gender would appear to somewhat affect the profile of psychological or psychiatric complaints affecting Black students insofar as these male students are less likely (and the remaining female students, therefore, correspondingly more likely) to present with V-codes and,

possibly, with the individual V-codes of relationship problem and pre- and post termination counselling for unplanned/unwanted pregnancy at the UCT-SHS-MHS. This finding is compatible with the gender-specific results previously detailed in section 6.2.2.1(a)(ii) so that Black race/population group would appear to exert little or no effect on mental disorders presenting in male students.

On the other hand, the race/population group-specific variable reported statistically significant results for the same conditions in White students (as "other" disorders were not further investigated for the combined variable of race/population group and gender, it is not possible to assess whether eating disorders (bulimia) retained their statistically significant findings in White male students) as well as a predominance for adjustment disorder but not for the individual V-code of relationship problem and pre- and post termination counselling for unplanned/unwanted pregnancy. Therefore, male gender would not appear to fundamentally affect the profile of psychological or psychiatric complaints affecting White students insofar as these male students are less likely (and the remaining female students, therefore, correspondingly more likely) to present with adjustment disorder at the UCT-SHS-MHS. This finding is also compatible with the gender-specific results previously detailed in section 6.2.2.1(a)(ii) so that White race/population group would appear to exert little or no effect on mental disorders presenting in male students.

(Also refer to section 6.2.2.2(a)(ii) for further details of the possible rationale behind race/population group-specific findings.)

D: Black female students versus White female students

- Tables 5.37 and 5.41 demonstrate that, in the abridged format, the above predominance of White female students was not maintained for all five major diagnostic categories with notable exceptions being V-codes including the entities of family problem, academic problem and complicated bereavement. Only V-codes produced a statistically significant (p=0,000) result in favour of Black female students while only "other" disorders produced a statistically significant (p=0,000) result in favour of White female students.

The race/population group-specific variable also recorded a statistically significant result for anxiety (neurotic) disorder in Black students (as "other" disorders were not further investigated for the combined variable of race/population group and gender, it is not possible to assess whether sexual disorder retained its statistically significant finding in Black female students) as well as a predominance for the individual V-codes of relationship problem and pre- and post termination counselling for unplanned/unwanted pregnancy. Therefore, female gender (as in the case of male gender above) would appear to somewhat affect the profile of psychological or psychiatric complaints affecting Black students insofar as these female students are less likely (and the remaining male students, therefore, correspondingly more likely) to present with anxiety (neurotic) disorder and, possibly, with the individual V-code of relationship problem at the UCT-SHS-MHS. This finding is compatible with the gender-specific results previously detailed in section 6.2.2.1(a)(ii) so that Black race/population group would appear to exert little or no effect on mental disorders presenting in female students.

On the other hand, the race/population group-specific variable reported statistically significant results for the same conditions in White students (as "other" disorders were not further investigated for the combined variable of race/population group and gender, it is not possible to assess whether eating disorders (bulimia) retained their statistically significant findings in White female students) but not a predominance for the individual V-codes of relationship problem and pre- and post termination counselling for unplanned/unwanted pregnancy. Therefore, female gender (as in the case of male gender above) would not appear to fundamentally affect the profile of psychological or psychiatric complaints affecting White students insofar as these female students are possibly not less (i.e. more) likely (and the remaining male students, therefore, correspondingly less likely) to present with the individual V-codes of relationship problem and pre- and post termination counselling for unplanned/unwanted pregnancy at the UCT-SHS-MHS. This finding is also compatible with the gender-specific results previously detailed in section 6.2.2.1(a)(ii) so that White race/population group would appear to exert little or no effect on mental disorders presenting in female students.

(Also refer to section 6.2.2.2(a)(ii) for further details of the possible rationale behind race/population group-specific findings.)

E: Black male students versus White female students

- Tables 5.36 and 5.40 as well as Tables 5.37 and 5.41 demonstrate that, in the abridged format, the above predominance of White female students was not maintained for all five major diagnostic categories with notable exceptions being anxiety (neurotic) disorder and the individual V-code of academic problem. Unadjusted ORs were not performed for the cross-race/population group and gender format.

The gender-specific variable also reported a male predominance for "other" disorders while the race/population group-specific variable also recorded a Black student predominance for V-codes including the individual entities of relationship problem, family problem, complicated bereavement and pre- and post termination counselling for unplanned/unwanted pregnancy (as "other" disorders were not further investigated for the combined variable of race/population group and gender, it is not possible to assess whether psychotic disorder, sexual disorder and substance abuse disorders retained their statistically significant findings in Black male students or whether eating disorders (bulimia) maintained their statistically significant finding in White female students). Therefore, both gender and race/population group (especially), for this cross-race/population group and gender format, would appear to fairly profoundly affect the profile of psychological or psychiatric complaints affecting students presenting at the UCT-SHS-MHS.

(Refer to sections 6.2.2.1(a)(ii) and 6.2.2.2(a)(ii) for further details of the possible rationale behind gender-specific and race/population group-specific, respectively, findings.)

F: Black female students versus White male students

- Tables 5.37 and 5.41 as well as Tables 5.36 and 5.40 demonstrate that, in the abridged format, the above predominance of Black female students was not maintained for all five major diagnostic categories with notable exceptions being "other" disorders and the individual V-code of academic problem. Unadjusted ORs were not performed for the cross-race/population group and gender format

The gender-specific variable also reported a male predominance for anxiety (neurotic) disorder while the race/population group-specific variable also recorded a Black student predominance for V-codes including the individual entities of relationship problem, family problem, complicated bereavement and pre- and post termination counselling for unplanned/unwanted pregnancy as well as anxiety (neurotic) disorder but not for "other" disorders (as "other" disorders were not further investigated for the combined variable of race/population group and gender, it is not possible to assess whether psychotic disorder, eating disorders (bulimia), sexual disorder and substance abuse disorders retained their statistically significant findings in White male students or whether eating disorders (bulimia) and sexual disorder maintained their statistically significant findings in Black female students). Therefore, both gender and race/population group (especially), for this cross-race/population group and gender format, would appear to fairly profoundly affect the profile of psychological or psychiatric complaints affecting students presenting at the UCT-SHS-MHS.

(Refer to sections 6.2.2.1(a)(ii) and 6.2.2.2(a)(ii) for further details of the possible rationale behind gender-specific and race/population group-specific, respectively, findings.)

(b) Objective 2 (patients versus controls)

The following results were previously detailed in section 5.1.2.3:

- Tables 5.44 and 5.47 demonstrate that, in the non-abridged format, only Coloured male and Coloured female students stratified by race/population group and Indian females and White females stratified by gender (conventional format) and Coloured male versus White male students (matrix format) are statistically more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS while only White male and African female students stratified by race/population group and Indian males and White males stratified by gender (conventional format) and African female versus Coloured female, Indian female and White female students (matrix format) are statistically less likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS.
- Tables 5.49, 5.60 and 5.63 demonstrate that, in the abridged format: (i) Black (African, Coloured and Indian) female students are statistically more likely than Black male students to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS – this finding confirms Research Hypothesis Ia of the UCT-SHS study stratified by the race/population group of Black students; (ii) White female students are statistically more likely than White male students to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS – this finding confirms Research Hypothesis Ia of the UCT-

SHS study stratified by the race/population group of White students; (iii) Black male students are statistically more likely than White male students to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS – this finding confirms Research Hypothesis IIa of the UCT-SHS study stratified by male gender; (iv) Black female students are not statistically more likely than White female students to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS – this finding rejects Research Hypothesis IIa of the UCT-SHS study stratified by female gender; (v) White female students are statistically more likely than Black male students to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS – this finding confirms Research Hypothesis Ia but rejects Research Hypothesis IIa of the UCT-SHS study, and (vi) Black female students are statistically more likely than White male students to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS – this finding confirms both Research Hypothesis Ia and Research Hypothesis IIa of the UCT-SHS study.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.3.3:

- No sample quoted in the literature employed medical controls stratified by race/population group and gender and reported findings in the format employed in the UCT-SHS study (also refer to section 6.1.1.1(b)).

The above confirmation of Research Hypothesis Ia of the UCT-SHS study for both Black students and White students together with the confirmation of Research Hypothesis IIa of the UCT-SHS study for male students and the rejection of Research Hypothesis IIa of the UCT-SHS study for female students suggests that, amongst UCT-SHS attendees: (i) female students, independent of race/population group, were significantly more likely than male students to use the mental health service; (ii) Black male students were significantly more likely than White male students to use the mental health service, and (iii) Black female students were not statistically more likely than White female students to use the mental health service. There are at least two possible explanations for these findings: (i) a potentially greater knowledge of the psychotherapeutic process and its benefits exists amongst – for gender – the female student community, independent of race/population group and – for race/population group – Black male students but not Black female students, or (ii) – for gender – female students, independent of race/population group and – for race/population group – Black male students but not Black female students, might find the psychotherapeutic process less threatening.

(c) Objective 3 (patients versus the total student community)

(i) Patient-specific data

The following results were previously detailed in section 5.1.2.3:

- Tables 5.45 and 5.48 demonstrate that, in the non-abridged format, only African male and African female students stratified by race/population group and African female, Coloured female, Indian female and White female students stratified by gender (conventional format) and African male versus Coloured male, Indian male and White male students and African female versus Coloured female, Indian female and White female students (matrix format) are

statistically more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS while only White male and White female students stratified by gender (conventional format) are statistically less likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS. Likewise, Table 5.46 demonstrates and Figure 5.9 illustrates that the usage/utilisation rate per 1 000 students is highest for African female students (109,6) followed by African male, Coloured female, Indian female, White female, Indian male, Coloured male and White male students (65,7; 56,4; 54,4; 44,8; 25,4; 24,1 and 19,5, respectively).

- Tables 5.50, 5.61 and 5.64 demonstrate that, in the abridged format: (i) Black (African, Coloured and Indian) female students are, again, statistically more likely than Black male students to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than their representation of the student community would suggest – this finding confirms Research Hypothesis Ia of the UCT-SHS study stratified by the race/population group of Black students; (ii) White female students are, again, statistically more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than their representation of the student community would suggest – this finding confirms Research Hypothesis Ia stratified by the race/population group of White students; (iii) Black male students are, again, statistically more likely than White male students to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than their representation of the student community would suggest – this finding confirms Research Hypothesis IIa of the UCT-SHS study stratified by male gender; (iv) Black female students are statistically more likely than White female students to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than their representation of the student community would suggest – this finding confirms Research Hypothesis IIa of the UCT-SHS study stratified by female gender; (v) Black male students are not statistically more likely than White female students to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than their representation of the student community would suggest – this finding rejects both Research Hypothesis Ia and Research Hypothesis IIa of the UCT-SHS study, and (vi) Black female students are, again, statistically more likely than White male students to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than their representation of the student community would suggest – this finding confirms both Research Hypothesis Ia and Research Hypothesis IIa of the UCT-SHS study. Likewise, Tables 5.51, 5.62 and 5.65 demonstrate and Figures 5.10, 5.11 and 5.12 illustrate that the usage/utilisation rate per 1 000 students is: (i) 65,4 per cent higher for Black female students at 75,9 compared to 45,9 for Black males; (ii) 129,7 per cent higher for White female students at 44,8 compared to 19,5 for White males; (iii) 135,4 per cent higher for Black male students at 45,9 compared to 19,5 for White males; (iv) 69,4 per cent higher for Black female students at 75,9 compared to 44,8 for White females; (v) 2,5 per cent higher for Black male students at 45,9 compared to 44,8 for White females, and (vi) 289,2 per cent higher for Black female students at 75,9 compared to 19,5 for White males.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.3.3:

- No sample quoted in the literature employed non-mental health services attendees within the total student community as a set of controls stratified by race/population group and gender and reported findings in the format employed in the UCT-SHS study (also refer to section 6.1.1.1(c)). In addition, no sample quoted in the literature (including Gibbs, 1975, at Stanford University, USA) reported the race/population group and gender-specific usage/utilisation rate per 1 000 students.

It is clearly apparent that, in the non-abridged format, as in race/population group, the respective usage/utilisation rates per 1 000 students recorded by the individual race/population groups stratified by female gender – but not male gender –would appear to mirror the perceived hierarchy of historical (dis)advantage existing under the previous dispensation (i.e. refer to section 6.2.2.2(a)(iii) for further details). The candidate does, however, recognise that this form of generalisation is not only unscientific, but could also give rise to offence. For male gender, which uniformly records lower usage/utilisation rate per 1 000 students across the different race/population groups, the relative position of Coloured and Indian students is reversed. The reason for this departure from the above hierarchy is unclear although it could be related to cultural factors which might impose extra pressure on Indian males relative to their Coloured male peers.

The above confirmation of Research Hypothesis Ia of the UCT-SHS study for both Black students and White students together with the confirmation of Research Hypothesis IIa of the UCT-SHS for both male students and female students suggests that most of the observations made in sections 3.3.2.1 and 3.3.2.2 of the Literature Review concerning possible reasons for increased female student and Black student, respectively, usage of the mental health service were well founded.

These observations will not be detailed here as they have already been contextualised with respect to gender-specific results in section 6.2.2.1(a)(iii) and race/population group-specific results in section 6.2.2.2(a)(iii).

In addition, in the Literature Review it has been reported that Fleming (1984) found there are persistent differences in the college experiences of Black males and females. Amongst these students, the author found that females: (i) were more anxious in competition; (ii) felt less competent, and (iii) were less assertive than males. Likewise, Smith (1988) claimed that Black female students in the USA engage in more self-deprecation and often have low occupational aspirations even if they have high grades. These factors mean that Black females are at a distinct disadvantage compared to Black males. Allen (1992) concludes that Black women were shown to encounter challenges and problems arising from their unique identity in two (gender and race), if not three (gender, race and class) discriminated categories. The challenges, according to the author, often represented serious barriers to Black women's satisfaction with and achievement in college/university.

According to Mokwena (1992), intrinsic to South African Black communities is the fact that Black women bear the brunt of a cumbersome domestic economy which involves virtual domestic servitude. The author notes that this tradition reinforces their subservient role as women and in the long run interferes with their ability to succeed in spheres beyond the domestic arena. Thus a greater percentage of women fail to acquire a tertiary level education than men. However, any Black female who does attend college/university may still be subject to such household commitments – especially if she is a mature student with a family – which may, in turn, interfere with her studies.

– Objective 2 versus Objective 3

It is notable that, in the abridged format, both Objectives 2 and 3 of the gender-specific variable stratified by the race/population groups of Black and White students, respectively, recorded statistically significant findings in favour of female students – this includes the cross-race/population group and gender format of Black females versus White males. These results suggest that both Black and White female students are both more likely to seek therapeutic intervention at the UCT-SHS-MHS than make use of the medical facilities provided by the UCT-SHS and to selectively present at the UCT-SHS-MHS with psychological or psychiatric complaints. The most likely reason for this finding is either that these students are not particularly prone to physical complaints or, probably, that they have a somewhat greater understanding of the psychotherapeutic process than their Black and White, respectively, male peers who, on the other hand, are possibly more unaware and unsure of the potential benefits to be derived from this process.

It is noteworthy that both Objectives 2 and 3 of the race/population group-specific variable stratified by male (but not female) gender recorded statistically significant findings in favour of Black students. These results suggest that Black male (but not female) students are more likely to seek therapeutic intervention at the UCT-SHS-MHS than make use of medical facilities provided by the UCT-SHS. The most likely reason for this finding is either that these students are not particularly prone to physical complaints or, improbably, that they have a somewhat greater understanding of the psychotherapeutic process than their White male (but not female) peers who, on the other hand, are highly unlikely to be more unaware and unsure of the potential benefits to be derived from this process. Nevertheless, despite the above observations, Black female students are more likely than White female students to use the UCT-SHS-MHS as confirmed by a considerably higher usage/utilisation rate.

It is meaningful that Objective 2 of the race/population group-specific variable stratified by female gender did not record a statistically significant finding while Objective 3 did report one in favour of Black female students and Objective 2 of the cross-race/population group and gender format of White female students versus Black male students recorded a statistically significant finding in favour of White females while Objective 3 did not report one. The most likely reason for these somewhat anomalous findings is that Black (predominantly African) male and female students, possibly on the basis of cultural factors, may be more likely to somatise their psychological or psychiatric complaints and, thereby, attend the UCT-SHS for various psychosomatic/psychophysiological disorders rather than the UCT-SHS-MHS for their underlying mental disorder. On the other hand, White female students, generally being more aware of the psychological basis of certain physical complaints, may be more likely to directly approach the UCT-SHS-MHS for evaluation and therapeutic intervention (refer to section 6.2.2.2 for further details).

(ii) Clinical/diagnostic-specific data

The following results were previously detailed in section 5.1.2.3:

A: Black male students versus Black female students

- Tables 5.54 and 5.58 demonstrate that, in the abridged format, the above raised usage/utilisation rate per 1 000 students for Black female students was not maintained for all five major diagnostic categories with notable exceptions being "other" disorders and the individual V-code of academic problem.

The gender-specific variable recorded raised usage/utilisation (prevalence) rates for the same conditions in male students relative to female students (as "other" disorders were not further investigated for the combined variable of race/population group and gender, it is not possible to assess whether psychotic disorder, sexual disorder and substance abuse disorders also documented raised usage/utilisation (prevalence) rates in Black male relative to Black female students). Therefore, additional stratification by Black race/population group would not appear to affect the gender-specific profile of psychological or psychiatric complaints affecting students presenting at the UCT-SHS-MHS.

B: White male students versus White female students

- Tables 5.55 and 5.59 demonstrate that, in the abridged format, the above raised usage/utilisation rate per 1 000 students for White female students was maintained for all five major diagnostic categories although a notable exception within the individual V-codes was academic problem.

The gender-specific variable also recorded raised usage/utilisation (prevalence) rates for "other" disorders in male students relative to female students (as "other" disorders were not further investigated for the combined variable of race/population group and gender, it is not possible to assess whether psychotic disorder, sexual disorder and substance abuse disorders also documented raised usage/utilisation (prevalence) rates in White male relative to White female students). Therefore, additional stratification by White race/population group (unlike the case of Black race/population group above) would appear to affect the gender-specific profile of psychological or psychiatric complaints affecting students presenting at the UCT-SHS-MHS. As "other" disorders consist of a collection of widely differing mental disorders, it is not feasible to meaningfully reflect on possible reasons for their lower (as opposed to raised) usage/utilisation (prevalence) rate in White males relative to White females. However, White female students display an overall usage/utilisation rate that is 2,3 times greater than that of their White male peers (44,8 and 19,5 per 1 000 students, respectively) compared to corresponding values that are only 1,7 times greater in Black students (109,6 and 65,7 per 1 000 students for males and females, respectively). Therefore, it is possible that this disproportionately raised overall usage/utilisation rate in White female students may have contributed to the reversal of this gender-specific finding. In addition, section 6.2.2.2(c)(ii) has previously documented that the selected "other" disorder of eating disorders (especially bulimia) has a considerably higher usage/utilisation (prevalence) rate

for White students compared to Black students – this result presents a further possible contributory factor to the above finding as these disorders are known to predominantly affect females.

C: Black male students versus White male students

- Tables 5.52 and 5.56 demonstrate that, in the abridged format, the above raised usage/utilisation rate per 1 000 students for Black male students was maintained for all five major diagnostic categories as well as the five individual V-codes.

The race/population group-specific variable also recorded raised usage/utilisation (prevalence) rates for none of these disorders in White students relative to Black students (as "other" disorders were not further investigated for the combined variable of race/population group and gender, it is not possible to assess whether psychotic disorder, sexual disorder and substance abuse disorders also documented raised usage/utilisation (prevalence) rates in Black male relative to White male students). Therefore, additional stratification by male gender would not appear to affect the race/population group-specific profile of psychological or psychiatric complaints affecting students presenting at the UCT-SHS-MHS.

D: Black female students versus White female students

- Tables 5.53 and 5.57 demonstrate that, in the abridged format, the above raised usage/utilisation rate per 1 000 students for Black female students was not maintained for all five major diagnostic categories with the notable exception being "other" disorders.

The race/population group-specific variable did not record raised usage/utilisation (prevalence) rates for any of these disorders in White students relative to Black students (as "other" disorders were not further investigated for the combined variable of race/population group and gender, it is not possible to assess whether psychotic disorder, sexual disorder and substance abuse disorders also documented raised usage/utilisation (prevalence) rates in Black female relative to White female students). Therefore, additional stratification by female gender (unlike the case of male gender above) would appear to affect the race/population group-specific profile of psychological or psychiatric complaints affecting students presenting at the UCT-SHS-MHS. As "other" disorders consist of a collection of widely differing mental disorders, it is not feasible to meaningfully reflect on possible reasons for their raised usage/utilisation (prevalence) rate in White females relative to Black females. As stated in subdivision B above, section 6.2.2.2(c)(ii) has previously documented that the selected "other" disorder of eating disorders (especially bulimia), which is known to predominantly affect females, has a considerably higher usage/utilisation (prevalence) rate for White students compared to Black students – this result may, at least, partially explain the reversal of this gender-specific finding.

E: Black male students versus White female students

- Tables 5.52 and 5.56 as well as Tables 5.53 and 5.57 demonstrate that, in the abridged format, the above raised usage/utilisation rate per 1 000 students for White female students was not maintained for all five major diagnostic categories with notable exceptions being anxiety (neurotic) disorder and "other" disorders as well as the individual V-codes of complicated bereavement and academic problem.

The gender-specific variable did not record raised usage/utilisation (prevalence) rates for anxiety (neurotic) disorder or complicated bereavement in male students relative to female students while the race/population group-specific variable did not record raised usage/utilisation (prevalence) rates for any of these disorders in White students relative to Black students (as "other" disorders were not further investigated for the combined variable of race/population group and gender, it is not possible to assess whether psychotic disorder, sexual disorder and substance abuse disorders also documented raised usage/utilisation (prevalence) rates in Black male relative to White female students). Therefore, for this cross-race/population group and gender format, additional stratification by race/population group would appear to affect the gender-specific profile of psychological or psychiatric complaints affecting students presenting at the UCT-SHS-MHS. Section 6.2.2.2(c)(ii) has previously documented that anxiety (neurotic) disorder has a higher usage/utilisation (prevalence) rate in Black students compared to White students. This is not an unexpected finding considering the magnitude of the adjustment process required of the vast majority of these historically disadvantaged students in order to pursue a tertiary education at the University of Cape Town. Therefore, the magnitude of this race/population group-specific finding is sufficient to reverse the corresponding gender-specific finding which favours female students. In addition, section 6.2.2.2(c)(ii) has also reported that complicated bereavement has a higher usage/utilisation (prevalence) rate in Black students compared to their White peers. Again, this finding can be fairly readily explained by considering the often violent environments from which these students derive where loved ones could easily fall victim to social unrest. Once more, the magnitude of this race/population group-specific finding is sufficient to reverse the corresponding gender-specific finding which again favours female students.

F: Black female students versus White male students

- Tables 5.53 and 5.57 as well as Tables 5.52 and 5.56 demonstrate that, in the abridged format, the above raised usage/utilisation rate per 1 000 students for Black female students was not maintained for all five major diagnostic categories with notable exceptions being "other" disorders and the individual V-code of academic problem.

The gender-specific variable recorded raised usage/utilisation (prevalence) rates for the same conditions in male students relative to female students while the race/population group-specific variable did not record raised usage/utilisation (prevalence) rates for any of these disorders in White students relative to Black students (as "other" disorders were not further investigated for the combined variable of race/population group and gender, it is not possible to assess whether psychotic disorder, sexual disorder and substance abuse disorders also documented raised usage/utilisation (prevalence) rates in White male relative to Black female students). Therefore, for this cross-race/population group and gender format, additional stratification by

race/population group (unlike the case of Black male students versus White female students) would not appear to affect the gender-specific profile of psychological or psychiatric complaints affecting students presenting at the UCT-SHS-MHS.

(d) Objective 4 (mean number of consultations)

The following results were previously detailed in section 5.1.2.3:

- Table 5.66 demonstrates that, in the non-abridged format, there was a significant difference for gender (Type ISS only) for the mean number of consultations with Coloured male students requiring the greatest mean number of consultations (4,31) at the UCT-SHS-MHS from 1991 to 1993 followed by White female, Coloured female, African female, Indian male, Indian female and African male students (4,28; 4,1; 3,9; 3,53; 3,48; 3,2 and 3,0, respectively).
- Table 5.68 demonstrates that, in the abridged format, the mean number of consultations is higher for: (i) Black (African, Coloured and Indian) female students than Black male students (by 18,2 per cent) who attended the UCT-SHS-MHS from 1991 to 1993; (ii) White female students than White male students (by 30,3 per cent) who attended the UCT-SHS-MHS from 1991 to 1993; (iii) White male students than Black male students (by 6,1 per cent) who attended the UCT-SHS-MHS from 1991 to 1993; (iv) White female students than Black female students (by 10,3 per cent) who attended the UCT-SHS-MHS from 1991 to 1993; (v) Black female students than White male students (by 11,4 per cent) who attended the UCT-SHS-MHS from 1991 to 1993, and (vi) White female students than Black male students (by 30,3 per cent) who attended the UCT-SHS-MHS from 1991 to 1993. None of these findings confirm Research Hypothesis Ib or Research Hypothesis IIb of the UCT-SHS study as the ANOVA (Type III SS) appearing in Table 5.67 does not produce a statistically significant result.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.3.3:

- No sample reported in the Literature Review documented their findings according to the non-abridged race/population group and gender classification employed in the UCT-SHS study which is unique to this country and its apartheid legacy.
- In the abridged format, results (i), (iii), (v) and (vi) are in agreement while results (ii) and (iv) are not in agreement with the race/population group and gender-specific sample quoted in the literature for developed (first world) countries (Gibbs, 1975, at Stanford University, USA).
- For mean number of consultation data, no sample reported the race/population group and gender-specific mean number of consultations for developing (third world) countries.
- For mean number of consultation data, no sample reported the race/population group and gender-specific mean number of consultations for Southern African countries.

The above rejection of both Research Hypothesis Ib and Research Hypothesis IIb of the UCT-SHS study suggests that – for gender – the female student community, independent of race/population group and – for race/population group – Black students, independent of gender, were not either: (i) suffering from more severe psychopathology; (ii) displaying an increased resistance to the therapeutic intervention employed; (iii) requiring a greater need for reinforcement, or (iv) being subject to a greater range of dependency issues than – for gender – their male peers and – for race/population group – their White peers, respectively. A possible alternative explanation is that – for gender – the female student community, independent of race/population group and – for race/population group – the Black student community, independent of

gender, respectively, did not possess an increased knowledge of the therapeutic process (refer to Objective 2) to more fully explore their presenting complaint.

– Objective 3 versus Objective 4

It is notable that, in the non-abridged format, unlike the example of usage/utilisation rate per 1 000 students, the mean number of consultations figures stratified by female gender do not entirely mirror the perceived hierarchy of historical (dis)advantage existing under the previous dispensation (refer above) insofar as Indian females do not retain their position between their White and Coloured female peers. It is noteworthy that, for female gender, these figures are provisionally arranged in order of decreasing level of historical advantage. Alternatively, for male gender, there is also only one race/population group that does not retain its position in this hierarchy insofar as African males do not precede their Coloured male peers as requiring the highest mean number of consultations – instead they require the lowest mean number of consultations which represents a major departure from this schema. In this example, it is notable that, unlike their female peers, for male gender, these figures are provisionally arranged in order of increasing level of historical advantage. Therefore, this finding would suggest that socio-economic status, as assessed by the proxy measure of race/population group under the apartheid dispensation, does not appear to affect the level of intervention required (as measured by length of psychotherapy received) by either female or, especially, male students for mental disorders presenting at the UCT-SHS-MHS although it does clearly seem to be linked to the actual prevalence of these conditions within the female (but not the male) student body. The potential consequence of this observation has been previously outlined in the corresponding subdivision of the race/population group-specific variable (refer to section 6.2.2.2(d) for further details).

In the abridged format, there is an association between the usage/utilisation rate per 1 000 students and the mean number of consultations required for Black male versus Black female students, White male versus White female students and Black female versus White male students, while on the other hand, there is no association between these two indicators for Black male versus White male students, Black female versus White female students and Black male versus White female students.

6.2.2.4 Age

Research Hypothesis IIIa

Older students (whose age is greater than 25 years) are more likely to present with mental disorders at the UCT-SHS-MHS than their younger peers.

Research Hypothesis IIIb

Older students (whose age is greater than 25 years) are likely to require more consultations for mental disorders at the UCT-SHS-MHS than their younger peers.

(a) Objective 1 (attendees)

(i) Patient-specific data

The following results were previously detailed in section 5.1.2.4:

- Table 5.69 demonstrates that, in the non-abridged format, 21 year old students were responsible for the greatest number of attendees at the UCT-SHS-MHS from 1991 to 1993 followed by 22 year old, 20 year old, 19 year old and 23 year old students.
- Table 5.70 demonstrates that, in the abridged format, 20-24 year old students were responsible for the greatest number of attendees at the UCT-SHS-MHS from 1991 to 1993 followed by students greater than or equal to 25 years of age and 15-19 year old students.
- Table 5.71 demonstrates that, in the highly abridged format, there was a greater number of students less than 25 years of age than students greater than or equal to 25 years of age (by 229,2 per cent) who attended the UCT-SHS-MHS from 1991 to 1993. The mean age of students attending the UCT-SHS-MHS is 22,8 years.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.3.4:

- Only two samples reported in the Literature Review (the two University of the Western Cape samples documented by Naidoo, 1997) recorded their findings according to the non-abridged age classification employed in the UCT-SHS study. In the 1995 sample, 20 and 22 year old students reported the joint greatest number of attendees closely followed by 21 year old students while 20 year old students followed by 22 and 21 year old students predominated in the 1996 sample. These UWC Centre for Student Counselling results are clearly highly compatible with those recorded at the UCT-SHS-MHS during the slightly earlier study period.
- No samples reported in the Literature Review recorded their findings according to the abridged World Health Organisation (WHO) age classification employed in the UCT-SHS study – although Sharp and Marra (1971) at the University of Wyoming, USA, employed the categories of 17-19; 20-29; 30-39 and greater than and equal to 40 years, while Walters (1970) at the University of Illinois, USA, arranged their findings into the categories of 18-21; 18-25 and greater than or equal to 30 years. In the University of Wyoming sample, 20-29 year old students reported the greatest number of attendees followed by 17-19 year old students while 18-25 year old students predominated in the University of Illinois sample. These results obtained from a developed (first world) country are compatible with those recorded at the UCT-SHS-MHS during the considerably later study period although the different age ranges employed in the various studies prevent a more detailed comparison between these findings.
- This predominance of younger traditional aged students is in agreement with definitely two (and probably all three) of the highly abridged compatible age-specific samples quoted in the literature for developed (first world) countries (Braaten and Darling, 1961, at Cornell University, USA; Walters, 1970, at the University of Illinois, USA; and (probably) Sharp and Marra, 1971, at the University of Wyoming, USA). The UCT-SHS-MHS mean age result is exceeded by only two of the ten (20,0 per cent) samples quoted in the literature for developed (first world) countries

(Gibbs, 1975, for postgraduate Black student attendees at Stanford University, USA, and Stangler and Printz, 1980, at the University of Washington, USA).

- This predominance of younger traditional aged students is in agreement with the highly abridged compatible age-specific sample quoted in the literature for developing (third world) countries (German and Arya, 1969, at Makerere University College, Uganda). The UCT-SHS-MHS mean age result (as well as all the individual gender, race/population group and race/population group and gender subcategories) is not exceeded by this sample.
- This predominance of younger traditional aged students is in agreement with both of the highly abridged compatible age-specific samples obtained from four Southern African universities (the two University of the Western Cape samples reported by Naidoo, 1997). The UCT-SHS-MHS mean age result (as well as the individual gender, race/population group and race/population group and gender subcategories for the 1995 UWC sample) is exceeded by both of these samples.

It must be noted that the above age-specific results for UCT-SHS-MHS student attendees (patients) are descriptive statistics presented according to the number of student attendees, per se, rather than according to usage/utilisation rates per 1 000 students as used in Objective 3 which compares attendees to the total student community. Therefore, this finding of a greater number of student attendees less than 25 years of age could be a factor related to the composition of the University of Cape Town student population rather than necessarily the demonstration of a student subset in great need of psychotherapeutic intervention.

(ii) Clinical/diagnostic-specific data

The following results were previously detailed in section 5.1.2.4:

- Tables 5.72 and 5.73 demonstrate that, in the highly abridged format, the above predominance of students less than 25 years of age was maintained for all five major diagnostic categories as well as the five individual V-codes. None of these disorders produced a statistically significant result in favour of either students who are less than 25 years of age or students who are greater than or equal to 25 years of age.

This result, as in the case of the patient-specific finding, is probably related to the composition of the University of Cape Town student population.

(b) Objective 2 (patients versus controls)

The following results were previously detailed in section 5.1.2.4:

- Unadjusted ORs for patients versus controls have not been employed for the non-abridged format of the age-specific variable.
- Tables 5.75 and 5.78 demonstrate that, in the abridged format, no World Health Organisation (WHO) designated age-specific subcategory (conventional format or matrix format) is either statistically more or less likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS.
- Table 5.80 demonstrates that, in the highly abridged format, students greater than or equal to 25 years of age are not statistically more likely than students less than 25 years of age to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS. This finding rejects Research Hypothesis IIIa of the UCT-SHS study.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.3.4:

- No sample quoted in the literature employed medical controls stratified by age and reported findings in the format employed in the UCT-SHS study (also refer to section 6.1.1.1(b)).

The above rejection of Research Hypothesis IIIa of the UCT-SHS study suggests that amongst UCT-SHS attendees, students greater than or equal to 25 years of age were not statistically more likely than students less than 25 years of age to use the mental health service. There are at least two possible explanations for this finding: (i) a potentially greater knowledge of the psychotherapeutic process and its benefits does not necessarily exist amongst the older student community, or (ii) older students might find the psychotherapeutic process more threatening than their younger peers.

(c) Objective 3 (patients versus the total student community)

(i) Patient-specific data

The following results were previously detailed in section 5.1.2.4:

- Unadjusted ORs for patients versus the total student community have not been employed for the non-abridged format of the age-specific variable. However, Table 5.74 demonstrates and Figure 5.13 illustrates that the usage/utilisation rate per 1 000 students is highest for 15 year old students (500,0) followed by 16 year old, 17 year old, 25 year old, 24 year old, 21 year old, 22 year old and 23 year old students (428,6; 171,1; 56,9; 49,9; 49,8; 47,8 and 42,4, respectively). It must be noted that the three highest usage/utilisation rate (all in excess of 150,0) are highly suspect as there was only one 15 year old, three 16 year old and thirteen 17 year old students in the University of Cape Town student body – although this finding would suggest that underaged students are, not surprisingly, more likely to develop mental disorders than their older and, generally, more mature peers.

  The erstwhile Chief Clinical Psychologist at the UCT-SHS-MHS (Mrs J. Taljaard-Plaut) has independently recommended that the University seriously reconsiders its registration policy with respect to these students as they do appear to be affected by serious social and adjustment problems to University life (personal communication).
- Tables 5.76 and 5.79- demonstrate that, in the abridged format, only 20-24 year old students (conventional format) and 15-19 year old versus greater than or equal to 25 year old students and 20-24 year old versus greater than or equal to 25 year old students (matrix format) are statistically more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS while only students greater than or equal to 25 years old (conventional format) are statistically less likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS. Likewise, Table 5.77 demonstrates and Figure 5.14 illustrates that the usage/utilisation rate per 1 000 students is highest for 20-24 year old students (45,7) followed by 15-19 year old and greater than or equal to 25 year old students (39,7 and 28,6, respectively).
- Table 5.81 demonstrates that, in the highly abridged format, students greater than or equal to 25 years of age are statistically less likely than students less than 25 years of age to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than their representation of the student community would suggest. This finding rejects Research Hypothesis IIIa of the UCT-SHS study. Likewise, Table 5.82

demonstrates and Figure 5.15 illustrates that the usage/utilisation rate per 1 000 students is 53,8 per cent higher for students less than 25 years of age at 44,0 compared to 28,6 for students greater than or equal to 25 years of age.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.3.4:

- No sample quoted in the literature employed non-mental health services attendees within the total student community as a set of controls stratified by age and reported findings in the format employed in the UCT-SHS study (also refer to section 6.1.1.1(c)). In addition, no sample quoted in the literature reported the age-specific usage/utilisation rate per 1 000 students.

The above rejection of Research Hypothesis IIIa of the UCT-SHS study suggests that most of the observations made in section 3.3.2.4 of the Literature Review concerning possible reasons for increased student greater than or equal to 25 years of age usage of the mental health service were either not particularly well founded or not sufficiently severe enough to result in UCT-SHS-MHS attendance. Therefore, these results do NOT necessarily suggest that:

(i) the older non-traditionally aged student (many of who are historically disadvantaged Black students) is often subject to increased social and familial responsibilities than their younger counterparts. These added responsibilities do not, however, appear to dispose these students to a host of, inter alia, adjustment disorders, and

(ii) the older non-traditionally aged student, who comprises a minority of the total (predominantly undergraduate) student community is often considerably older than his/her peers and, consequently, may find it difficult to relate to them. This could result in diminished interaction with fellow students and a feeling of alienation that does not appear, however, to predispose these students to affective disorders.

In addition, it has been reported in the Literature Review that Mechanic and Greenley (1976) observe that students with greater psychological distress are those who are relatively young as compared with their classmates so that the young college/university student who is intellectually advanced, but who may be more "socially immature", may face special mental health problems. Inversely, a positive relationship has been reported between age and coping (Michelson, 1991) so that older students may be better equipped to deal with environmental stress (Malefo, 1995). Family responsibility and/or obligations serve as a driving force behind older students' determination to succeed in and complete their studies (Nettles, 1988). In addition, low social integration whereby older students are less likely to participate in campus social activities could also contribute to slightly higher academic performance (Malefo, 1995). The latter commentaries relating to the older non-traditionally aged student could help to explain the reason for the unexpectedly lower prevalence of mental disorders in this group. Possibly the abovementioned family responsibilities affecting the historically disadvantaged Black student may serve to inspire him/her rather than proving to be an unsustainable burden.

– Objective 2 versus Objective 3

It is meaningful that, in the highly abridged format, Objective 2 of the age-specific variable did not record a statistically significant finding while Objective 3 did report one in favour of students less than 25 years of age. The most likely reason for this somewhat anomalous finding is that students less than 25 years of age may be more willing to attend the UCT-SHS for various physical complaints while avoiding the UCT-SHS-MHS because of ignorance and/or fear of the psychotherapeutic process. On the other hand, students greater than or equal to 25 years of age, generally being more aware of the psychological basis of certain physical complaints, may be more likely to directly approach the UCT-SHS-MHS for evaluation and/or therapeutic intervention. Therefore, younger students attending the UCT-SHS for purely physical complaints should be gently asked about the presence of any underlying mental disorders so that they could, if necessary, be seen by the resident psychologists or psychiatrist at the UCT-SHS-MHS.

(ii) Clinical/diagnostic-specific data

The following results were previously detailed in section 5.1.2.4:

- Tables 5.83 and 5.84 demonstrate that, in the highly abridged format, the above raised usage/utilisation rate per 1 000 students for students less than 25 years of age was maintained for all five major diagnostic categories although the notable exceptions within individual V-codes were academic problem and complicated bereavement.

This result suggests that older students, who have often been forced to disrupt their studies for financial reasons, may have difficulty in resuming academic activities. In addition, increased age may be associated with increased parental mortality.

(d) Objective 4 (mean number of consultations)

The following results were previously detailed in section 5.1.2.4:

- Table 5.89 demonstrates that, in the abridged format, there was no significant difference between the World Health Organisation (WHO) designated age categories for the mean number of consultations with students greater than or equal to 25 years of age requiring the greatest mean number of consultations (4,31) at the UCT-SHS-MHS from 1991 to 1993 followed by 20-24 year old and 15-19 year old students (3,8 and 3,6, respectively).
- Table 5.91 demonstrates that, in the highly abridged format, the mean number of consultations is higher for students greater than or equal to 25 years of age than students less than 25 years of age (by 8,1 per cent) who attended the UCT-SHS-MHS fro 1991 to 1993. This finding does not confirm Research Hypothesis IIIb of the UCT-SHS study as the ANOVA appearing in Table 5.90 does not produce a statistically significant result.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.3.4:

- No sample quoted in the literature reported the age-specific mean number of consultations.

The above rejection of Research Hypothesis IIIb of the UCT-SHS study suggests that students greater than or equal to 25 years of age were not either: (i) suffering from more severe psychopathology; (ii) displaying an increased resistance to the therapeutic intervention employed; (iii) requiring a greater need for reinforcement, or (iv) being subject to a greater range of dependency issues than their less than 25 year old peers. A possible alternative explanation is that students greater than or equal to 25 years of age did not possess an increased knowledge of the therapeutic process (refer to Objective 2) to more fully explore their presenting complaint.

– Objective 3 versus Objective 4

It is notable that, in the highly abridged format, there seems to be a relationship between increasing age and lengthening duration of psychotherapy required for psychological or psychiatric complaints presenting at the UCT-SHS-MHS, which is in contrast to the preceding example of usage/utilisation rate per 1 000 students where no age-specific association is documented and students greater than or equal to 25 years of age record the lowest prevalence of mental disorders within the total student community.

In the highly abridged format there is no association between usage/utilisation rate per 1 000 students and the mean number of consultations required for students less than 25 years of age versus students greater than or equal to 25 years of age.

6.2.2.5 Language

Research Hypothesis IVa

Non-English first language speaking students are more likely to present with mental disorders at the UCT-SHS-MHS than their English first language speaking peers.

Research Hypothesis IVb

Non-English first language speaking students are likely to require more consultations for mental disorders at the UCT-SHS-MHS than their English first language speaking peers.

(a) Objective 1 (attendees)

(i) Patient-specific data

The following results were previously detailed in section 5.1.2.5:

- Table 5.92 demonstrates that, in the non-abridged format, English first language speaking students were responsible for the greatest number of attendees at the UCT-SHS-MHS from 1991 to 1993 followed distantly by other (remaining), IsiXhosa, SeTswana, SeSotho and IsiZulu first language speaking students.

- Table 5.93 demonstrates that, in the abridged format, there was a greater number of English first language speaking students than non-English first language speaking students (by 95,9 per cent) who attended the UCT-SHS-MHS from 1991 to 1993.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.3.5:

- As the non-abridged language-specific format employed in the UCT-SHS study is unique to this country and its rich cultural legacy, it is not possible to compare these results to those reported in other countries that have a totally different language distribution. In addition, no other sample reported in the Literature Review documented their findings according to any language classification.
  This is somewhat surprising although the vast majority of the population attending tertiary educational institutions in both the UK and the USA, from whose college/university mental health service the vast majority of samples derived, are English first language speaking. However, as there is a rapidly increasing Spanish speaking population in the USA and a sizeable Asian community in the UK, this would appear to be an important issue that the more recent (i.e. late 1980s and 1990s) studies should possibly have addressed.

It must be noted that the above language-specific results for UCT-SHS-MHS student attendees (patients) are descriptive statistics presented according to the number of student attendees, per se, rather than according to usage/utilisation rates per 1 000 students as used in Objective 3 which compares attendees to the total student community. Therefore, this finding of a greater number of English first language speaking student attendees could be a factor related to the composition of the University of Cape Town student population rather than necessarily the demonstration of a student subset in great need of psychotherapeutic intervention.

(ii) Clinical/diagnostic-specific data

The following results were previously detailed in section 5.1.2.5:

- Tables 5.94 and 5.95 demonstrate that, in the abridged format, the above predominance of English first language speaking students was maintained for all five major diagnostic categories although notable exceptions within the individual V-codes were complicated bereavement (tied) and pre- and post termination counselling for unplanned/unwanted pregnancy. Only adjustment disorder and the individual V-code of family problem produced statistically significant (p=0,046 and 0,001, respectively) results in favour of English first language speaking students while only anxiety (neurotic) disorder produced a statistically significant (p=0,007) result in favour of non-English first language speaking students.

This result suggests that non-English first language speaking students, the majority of whom are historically disadvantaged Black (mainly African) students, are somewhat, although not significantly, more likely to present at the UCT-SHS-MHS with conditions which may well be intimately related to lifestyle characteristics. Complicated bereavement could be an unfortunate accompaniment to the high levels of violence affecting many of the townships and rural settlements in which these students live. Pre- and post termination counselling for unplanned/unwanted pregnancy could well be related to a combination of lack of knowledge of suitable and effective methods of birth control in female students – possibly as a by-product of their educationally underprepared state – coupled with an often increased linkage of self-identity and sexual

function in male students (refer to the relevant subdivisions in section 6.2.1.2(e) for further details of this hypothesis generated by personal observation).

The statistically significant overrepresentation of adjustment disorder in English (as opposed to non-English) first language speaking students is somewhat unexpected as one of the major themes of this research work has been that historically disadvantaged and educationally underprepared Black (mainly African) students, because of their background, are at increased risk of developing a host of adjustment disorders when attempting to meet the demands of a Eurocentric institution that is totally foreign to their culture. However, possibly due to other cultural factors, which the predominantly White UCT-SHS-MHS therapists have missed, these students may rather express these adjustment disorders in the form of anxiety (neurotic) disorders. Therefore, it is recommended that resident therapists to actively seek (and document in their coding on the "Patients Stat Details Sheet") the underlying cause of anxiety (neurotic) disorders presenting in these students which are probably the manifestation of the massive cultural adjustment to University life. The statistically significant overrepresentation of family problem in English first language speaking students could possibly be related to an increased willingness amongst these students to both acknowledge and discuss such issues as it would appear highly unlikely that their non-English first language speaking peers, by virtue of their often adverse domestic backgrounds, would be substantially less likely to be subject to such problems. Possibly shared adversity may play a uniting role that could protect such family relationships.

(b) Objective 2 (patients versus controls)

The following results were previously detailed in section 5.1.2.5:

- Table 5.96 demonstrates that, in the non-abridged format, only English first language speaking students are statistically more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS while only IsiXhosa first language speaking students are statistically less likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS.
- Table 5.99 demonstrates that, in the abridged format, non-English first language speaking students are statistically less likely than English first language speaking students to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS. This finding rejects Research Hypothesis IVa of the UCT-SHS study.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.3.5:

- No sample quoted in the literature employed medical controls stratified by language and reported findings in the format employed in the UCT-SHS study (also refer to section 6.1.1.1(b)).

The above rejection of Research Hypothesis IVa of the UCT-SHS study suggests that, amongst UCT-SHS attendees, non-English first language speaking students were significantly less likely than English first language speaking students to use the mental health service. There are at least two possible explanations for this finding: (i) a potentially inferior knowledge of the psychotherapeutic process and its benefits exists

amongst the non-English first language speaking student community; (ii) non-English first language speaking students might find the psychotherapeutic process more threatening than their English first language speaking peers, or (iii) there may be a greater stigma attached to emotional and mental disorders amongst the non-English first language speaking student community.

(c) Objective 3 (patients versus the total student community)

(i) Patient-specific data

The following results were previously detailed in section 5.1.2.5:

- Table 5.97 demonstrates that, in the non-abridged format, SeSotho, SeTswana, IsiXhosa and IsiZulu first language speaking students are statistically more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS while only English first language speaking students are statistically less likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS. Likewise, Table 5.98 demonstrates and Figure 5.16 illustrates that the usage/utilisation rate per 1 000 students is highest for SeTswana first language speaking students (98,1) followed by SeSotho, IsiZulu, IsiXhosa, English and other (remaining) first language speaking students (85,8; 75,8; 66,1; 33,9 and 32,6, respectively).
- Table 5.100 demonstrates that, in the abridged format, non-English first language speaking students are statistically more likely than English first language speaking students to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than their representation of the student community would suggest. This finding confirms Research Hypothesis IVa of the UCT-SHS study. Likewise, Table 5.101 demonstrates and Figure 5.17 illustrates that the usage/utilisation rate per 1 000 students is 64,9 per cent higher for non-English first language speaking students at 55,9 compared to 33,9 for English first language speaking students.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.3.5:

- No sample quoted in the literature employed non-mental health services attendees within the total student community as a set of controls stratified by language and reported findings in the format employed in the UCT-SHS study (also refer to section 6.1.1.1(c)). In addition, no sample quoted in the literature reported the language-specific usage/utilisation rate per 1 000 students.

The usage/utilisation rates per 1 000 students recorded by the individual languages, in the non-abridged format, could be employed as a proxy to further investigate the prevalence rates of mental disorders in the various ethnic-specific subsets of African students within the total student community. As stated above, in the race/population group and combined race/population group and gender variables, these students represent the group generally acknowledged to have been most severely affected and marginalized by the apartheid regime. All the above indigenous language usage/utilisation rates are well above the values previously recorded for Coloured, Indian and White students – although it is outside the scope of this research work to further speculate on reasons for the fairly widespread differences documented between the individual

languages. However, this finding could be due to cultural differences that may exist between these diverse ethnic groups.

The above confirmation of Research Hypothesis IVa of the UCT-SHS study supports the observations made in section 3.3.2.5 of the Literature Review concerning possible reasons for increased non-English first language speaking student usage of the mental health service were well founded. Therefore, these results suggest that the non-English first language speaking student (the majority of whom are historically disadvantaged Black students is not only subject to the same academic challenges of university life as his/her English first language speaking peer, but is also hindered by the burden of studying in what is to him/her, a foreign language. Consequently, all things being equal, this student is required to study even harder than his/her (generally) historically advantaged White peer in order to achieve a comparable academic performance. When this performance is further negatively affected by the legacy of an inadequate educational background, these students will, indeed, be predisposed to academic-related stress and resultant anxiety disorders.

In addition, it has been reported in the Literature Review that Selikow (1994) notes many Black students felt disadvantaged in relation to having English as a second language not because they feel that their English is inadequate but rather because they feel that, relative to their White counterparts their English is poor. Indeed, Ngwenya (1990) identifies four language skills that, if not fully developed, may impede the performance of first year second language English speaking students at colleges/universities. These are: (i) listening, and (ii) reading (receptive and decoding skills); (iii) speaking, and (iv) writing (productive and encoding skills). A lack of study skills and poor conceptual skills can also contribute to poor academic performance. It is therefore important that the UCT Academic Development Programme (ADP) should concentrate on improving these language skills in the historically disadvantaged and educationally underprepared Black students who require academic enhancement.

– Objective 2 versus Objective 3

It is extremely noteworthy that, in the abridged format, the statistically significant findings recorded in Objectives 2 and 3 of the language-specific variable favour English first language speaking students and non-English first language speaking students, respectively. The most likely reason for this anomalous finding is that non-English first language speaking students, the majority of whom are African students, may be more likely to somatise their psychological or psychiatric complaints and, thereby, attend the UCT-SHS for various psychosomatic/psychophysiological disorders rather than the UCT-SHS-MHS for their underlying mental disorder. On the other hand, English first language speaking students, the majority of whom are White students, generally being more aware of the psychological basis of certain physical complaints, may be more likely to directly approach the UCT-SHS-MHS for evaluation and/or therapeutic intervention.

(ii) Clinical/diagnostic-specific data

The following results were previously detailed in section 5.1.2.5:

- Tables 5.102 and 5.103 demonstrate that, in the abridged format, the above raised usage/utilisation rate per 1 000 students for non-English first language speaking students was maintained for all five major diagnostic categories although a notable exception within the individual V-codes was family problem.

As stated in Objective 1, this result is somewhat surprising and may be related to an increased willingness amongst English first language speaking students who are predominantly White to discuss such problems.

(d) Objective 4 (mean number of consultations)

The following results were previously detailed in section 5.1.2.5:

- Table 5.104 demonstrates that, in the non-abridged format, there was a significant difference for language (SeTswana versus English and SeSotho first language speaking students) for the mean number of consultations with SeSotho first language speaking students requiring the greatest mean number of consultations (4,3) at the UCT-SHS-MHS from 1991 to 1993 followed by other (remaining), English, IsiXhosa, IsiZulu and SeTswana first language speaking students (4,1; 3,9; 3,38; 3,35 and 2,2, respectively).
- Table 5.107 demonstrates that, in the abridged format, the mean number of consultations is higher for English first language speaking students than non-English first language speaking students (by 11,4 per cent) who attended the UCT-SHS-MHS from 1991 to 1993. This finding rejects Research Hypothesis IVb of the UCT-SHS study.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.3.5:

- No sample quoted in the literature reported the language-specific mean number of consultations.

The difference in the length of psychotherapy required for presenting psychological or psychiatric complaints, in the non-abridged format, may be due to cultural differences that might exist between the various ethnically diverse subsets of African students within the total student community.

The above rejection of Research Hypothesis IVb of the UCT-SHS study suggests that non-English first language speaking students were not either: (i) suffering from more severe psychopathology; (ii) displaying an increased resistance to the therapeutic intervention employed; (iii) requiring a greater need for reinforcement, or (iv) being subject to a greater range of dependency issues than their English first language speaking peers. A possible alternative explanation is that non-English first language speaking students could have been impeded by their decreased knowledge of the therapeutic process (refer to Objective 2) to prevent them from fully exploring their presenting complaint.

– Objective 3 versus Objective 4

It is notable that, in the non-abridged format, SeTswana first language speaking students, who recorded the lowest mean number of consultations required for psychological or psychiatric complaints presenting at the UCT-SHS-MHS, also previously reported the highest usage/utilisation rate per 1 000 students for mental disorders in the total student community. The reason for this apparent anomaly – as, in the case of the non-abridged format of the race/population group-specific variable, it would seem somewhat contradictory to assume that the majority of these disorders are minor complaints that can easily be rectified by minimal intervention – may be related to some cultural factor that is unique to this particular subset of students.

In the abridged format there is no association between usage/utilisation rate per 1 000 students and the mean number of consultations required for English first language speaking students versus non-English first language speaking students.

6.2.3 Academic Variables

6.2.3.1 Faculty

Research Hypothesis Va

Arts, Music and Social Science and Humanities faculty students are more likely to present with mental disorders at the UCT-SHS-MHS than non-Arts, Music and Social Science and Humanities faculty students.

Research Hypothesis Vb

Arts, Music and Social Science and Humanities faculty students are likely to require more consultations for mental disorders at the UCT-SHS-MHS than non-Arts, Music and Social Science and Humanities faculty students.

(a) Objective 1 (attendees)

(i) Patient-specific data

The following results were previously detailed in section 5.1.3.1:

- Table 5.108 demonstrates that, in the non-abridged format, Social Science and Humanities faculty students were responsible for the greatest number of attendees at the UCT-SHS-MHS from 1991 to 1993 followed by Arts, Science, Commerce, Engineering, Medicine, Education, Fine Art and Architecture, Law and Music faculty students.

- Table 5.109 demonstrates that, in the abridged format, there was a greater number of non-Arts, Music and Social Science and Humanities faculty students than Arts, Music and Social Science and Humanities faculty students (by 3,4 per cent) who attended the UCT-SHS-MHS from 1991 to 1993.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.4.1:

- No samples reported in the Literature Review recorded their findings according to the non-abridged faculty classification employed in the UCT-SHS study. However, in developed (first world) countries, Boor (1975) at Fort Hays Kansas State College, USA, reported Arts, Commerce, Education, Medicine, Music, Science and Social Science and Humanities faculties; Dunn et al. (1980) at University College, Swansea, UK, documented Arts, Commerce, Medicine, Science and Engineering and Social Science and Humanities faculties, and Sharp and Marra (1971) at the University of Wyoming, USA, recorded Agriculture, Arts and Science, Commerce and Industry, Education, Engineering, Law, Nursing and Pharmacy faculties. In the sole Southern African sample, Naidoo (1997) at the University of the Western Cape documented Arts, Community and Health, Dentistry, Economics and Management, Education, Law, Science and Theology and Religion faculties. In the Fort Hays Kansas State College sample, above, Arts faculty reported the greatest number of attendees while Social Science and Humanities and Arts faculty students predominated in the University College, Swansea, sample; Arts and Science faculty students in the University of Wyoming sample, and Arts faculty students in the University of the Western Cape sample. These results obtained from both developed (first world) and Southern African countries are compatible with those recorded at the UCT-SHS-MHS during the considerably later study period for developed (first world) countries and the slightly earlier study period for the local study although the different faculties employed in the various studies prevent a more detailed comparison between these findings.
- The abridged format result is in agreement with at least two of the three (66,7 per cent) faculty-specific samples quoted in the literature for developed (first world) countries that reported detailed faculty-specific attendances (Boor, 1975, at Fort Hays Kansas State College, USA, and Dunn et al. (1980), at the College Mental Health Center in Boston, USA).
- For attendance data, no sample reported the faculty-specific attendance data for developing (third world) countries.
- The abridged format result is in agreement with both faculty-specific samples obtained from four Southern African universities (the two University of the Western Cape samples reported by Naidoo, 1997).

It must be noted that the above faculty-specific results for UCT-SHS-MHS student attendees (patients) are descriptive statistics presented according to the number of student attendees, per se, rather than according to usage/utilisation rates per 1 000 students as used in Objective 3 which compares attendees to the total student community. Therefore, this finding of a greater number of non-Arts, Music and Social Science and Humanities faculty student attendees could be a factor related to the composition of the University of Cape Town student population rather than necessarily the demonstration of a student subset in great need of psychotherapeutic intervention.

(ii) Clinical/diagnostic-specific data

The following results were previously detailed in section 5.1.3.1:

- Tables 5.110 and 5.111 demonstrate that, in the abridged format, the above predominance of non-Arts, Music and Social Science and Humanities faculty students was not maintained for all five major diagnostic categories with notable exceptions being affective disorder, adjustment disorder and V-codes – including the individual entities of relationship problem and family problem (tied). Only "other" disorders produced a statistically significant (p=0,014) result in favour of non-Arts, Music and Social Science and Humanities faculty students.

This result demonstrates that Arts, Music and Social Science and Humanities faculty students are somewhat, although not significantly, more likely to present at the UCT-SHS-MHS with these disorders which may well be a consequence of personality factors relating to students who attend these humanities-based faculties (refer to a summary of the personal attributes of these students, on page 577, for further details). Indeed, it is possible that these attributes may also be responsible for these students' difficulty in maintaining sound interpersonal relationships as demonstrated by their increased number of both relationship and family problems.

As "other" disorders consist of a collection of widely differing mental disorders, it is not feasible to meaningfully reflect on possible reasons for their statistically significant overrepresentation in non-Arts, Music and Social Science and Humanities faculty students. However, one theory could be that, for whatever reason, these students who are mainly in highly structured degree courses, might either be more easily characterised as presenting with these various "other" disorders or, alternatively, prove more difficult to place into the other four major diagnostic categories than their Arts, Music and Social Science and Humanities faculty peers who are often enrolled in less structured and more individually orientated degree courses.

(b) Objective 2 (patients versus controls)

The following results were previously detailed in section 5.1.3.1:

- Table 5.112 demonstrates that, in the non-abridged format, Arts and Social Science and Humanities faculty students are statistically more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS while Commerce and Engineering faculty students are statistically less likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS.
- Table 5.115 demonstrates that, in the abridged format, Arts, Music and Social Science and Humanities faculty students are statistically more likely than non-Arts, Music and Social Science and Humanities faculty students to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS. This finding confirms Research Hypothesis Va of the UCT-SHS study.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.4.1:

- No sample quoted in the literature employed medical controls stratified by faculty and reported findings in the same format employed in the UCT-SHS study (also refer to section 6.1.1.1(b)).

The above confirmation of Research Hypothesis Va of the UCT-SHS study suggests that, amongst UCT-SHS attendees, Arts, Music and Social Science and Humanities faculty students were significantly more likely than non-Arts, Music and Social Science and Humanities faculty students to use the mental health service. There are at least two possible explanations for this finding: (i) a potentially greater knowledge of the psychotherapeutic process and its benefits exists amongst the Arts, Music and Social Science and Humanities faculty students, or (ii) Arts, Music and Social Science and Humanities faculty students might find the psychotherapeutic process less threatening than their non-Arts, Music and Social Science and Humanities faculty peers.

(c) Objective 3 (patients versus the total student community)

(i) Patient-specific data

The following results were previously detailed in section 5.1.3.1:

- Table 5.113 demonstrates that, in the non-abridged format, only Arts and Social Science and Humanities faculty students are statistically more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS while Commerce, Education, Law and Medicine faculty students are statistically less likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS. Likewise, Table 5.114 demonstrates and Figure 5.18 illustrates that the usage/utilisation rate per 1 000 students is highest for Arts faculty students (79,0) followed by Social Science and Humanities, Music, Science, Engineering, Fine Art and Architecture, Commerce, Law, Education and Medical faculty students (64,7; 45,7; 43,3; 36,6; 31,0; 24,9; 24,9; 24,6 and 14,4, respectively).
- Table 5.116 demonstrates that, in the abridged format, Arts, Music and Social Science and Humanities faculty students are statistically more likely than non-Arts, Music and Social Science and Humanities faculty students to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than their representation of the student community would suggest. This finding confirms Research Hypothesis Va of the UCT-SHS study. Likewise, Table 5.117 demonstrates and Figure 5.19 illustrates that the usage/utilisation rate per 1 000 students is 148,2 per cent higher for Arts, Music and Social Science and Humanities faculty students at 68,5 compared to 27,6 for non-Arts, Music and Social Science and Humanities faculty students.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.4.1:

- No sample quoted in the literature employed non-mental health service attendees within the total student community as a set of controls stratified by faculty and reported findings in the format employed by the UCT-SHS study (also refer to section 6.1.1.1(c)). However, usage/utilisation rates per 1 000 students stratified by faculty were reported in the literature:

- No samples reported in the Literature Review recorded their findings according to the non-abridged faculty classification which would appear to be somewhat unique to the University of Cape Town. However, three of the five samples recording usage/utilisation rate per 1 000 students for individual faculties or departments did document a raised figure for Arts or Social Science and Humanities faculty students (Dann, 1964, for psychology student attendees at University College, Swansea, UK; Maclay, 1967, for Arts faculty student attendees at Birmingham University, UK, and Schwarz, 1964, for Social Science and Humanities faculty students at the University of British Columbia, Canada). Another interesting trend that emerges from these results is that students involved in the delivery of healthcare services (whose equivalent would be registered at Medical faculty of the University of Cape Town) appear, unlike their UCT peers, to be more likely to attend the college/university mental health service (Maclay, 1967, for medical students; Schwarz, 1964, for nursing and rehabilitation students, and Naidoo, 1997, for Community and Health faculty students for both the 1995 (especially) and the 1996 samples.

  It has been previously suggested that students who are based at Medical School, which is circa two kilometres away from the UCT-SHS-MHS, would prefer to attend the more accessible Groote Schuur Hospital Psychiatry Outpatients Department for evaluation and/or therapeutic intervention of their presenting psychological or psychiatric complaints. Consequently, the UCT-SHS study will not reflect these consultations (refer to section 6.1.2.2 for further details). Therefore it is not possible to either confirm or reject the above trend relating to healthcare students within the University of Cape Town – although it would be expected that local students would be exposed to at least the same degree (or, conceivably, considerably greater levels) of stress than their foreign peers.
- The raised Arts, Music and Social Science and Humanities faculty student usage/utilisation rate, in the abridged format, is in agreement with all three of the faculty-specific samples quoted in the literature for developed (first world) countries (Dann, 1964, for psychology student attendees at University College Swansea, UK; Maclay, 1967, for Arts faculty student attendees at Birmingham University, UK, and Schwarz, 1964, for Social Science and Humanities faculty student attendees at the University of British Columbia, Canada).
- For usage/utilisation rate data, no sample reported the faculty-specific usage/utilisation rate per 1 000 students for developing (third world) countries.
- The raised Arts, Music and Social Science and Humanities faculty student usage/utilisation rate, in the abridged format, is in agreement with both of the faculty-specific samples obtained from four Southern African universities (the two University of the Western Cape samples reported by Naidoo, 1997).

The above confirmation of Research Hypothesis Va of the UCT-SHS study suggests that most of the observations made in section 3.3.3.1 of the Literature Review concerning possible reasons for increased Arts, Music and Social Science and Humanities faculty student usage of the mental health service were well founded. Therefore, these results suggest that these faculties offer mainly non-vocational courses which are (on the whole) less structured than those offered in the remaining non-Arts, Music and Social Science and Humanities faculties and are, therefore, possibly accompanied by enhanced levels of academic uncertainty amongst students. This uncertainty could, indeed, predispose these students to academic-related stress and resultant anxiety disorders.

In addition, it has been reported in the Literature Review that Boor (1975) states, for Arts students, persons with propensities toward relatively abstract, subjective ideation are more likely to experience personal adjustment difficulties or at least be more likely to seek help for these difficulties than are persons with propensities towards cognitions related to more concrete, objective concepts. On the other hand, Dann

(1964) suggests that it is quite possible that psychology students were more psychiatrically sophisticated than other students and therefore, more ready to refer symptoms they supposed to be psychiatric in origin to the doctor.

– Objective 2 versus Objective 3

It is notable that, in the abridged format, both Objectives 2 and 3 of the faculty-specific variable recorded statistically significant findings in favour of Arts, Music and Social Science and Humanities faculty students. These results suggest that Arts, Music and Social Science and Humanities faculty students are both more likely to seek therapeutic intervention at the UCT-SHS-MHS than make use of the medical facilities provided by the UCT-SHS and to selectively present at the UCT-SHS-MHS with psychological or psychiatric complaints. The most likely reason for this finding is either that these students are not particularly prone to physical complaints or, probably, that they have a greater understanding of the psychotherapeutic process than their non-Arts, Music and Social Science and Humanities faculty student peers (refer above) who, on the other hand, are somewhat unaware and unsure of the potential benefits to be derived from this process.

(ii) Clinical/diagnostic-specific data

The following results were previously detailed in section 5.1.3.1:

- Tables 5.118 and 5.119 demonstrate that, in the abridged format, the above raised usage/utilisation rate per 1 000 students for Arts, Music and Social Science and Humanities faculty students was maintained for all five major diagnostic categories as well as the five individual V-codes.

As stated in Objective 1, this result may be a consequence of personality factors relating to students who attend these humanities-based faculties.

(d) Objective 4 (mean number of consultations)

The following results were previously detailed in section 5.1.3.1:

- Table 5.120 demonstrates that, in the non-abridged format, there was no significant difference between the faculties for the mean number of consultations with Fine Art and Architecture faculty students requiring the greatest mean number of consultations (4,6) at the UCT-SHS-MHS from 1991 to 1993 followed by Arts, Social Science and Humanities, Law, Engineering, Medical, Education, Music, Science and Commerce faculty students (3,98; 3,97; 3,95; 3,82; 3,76; 3,7; 3,63; 3,62 and 3,1, respectively).
- Table 5.122 demonstrates that, in the abridged format, the mean number of consultations is higher for Arts, Music and Social Science and Humanities faculty students than non-Arts, Music and Social Science and Humanities faculty students (by 8,1 per cent) who attend the UCT-SHS-MHS from 1991 to 1993. This finding does not confirm Research Hypothesis Vb of the UCT-SHS study as the ANOVA appearing in Table 5.121 does not produce a statistically significant result.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.4.1:

- No sample quoted in the literature reported the faculty-specific mean number of consultations.

The above rejection of Research Hypothesis Vb of the UCT-SHS study suggests that Arts, Music and Social Science and Humanities faculty students were not either: (i) suffering from more severe psychopathology; (ii) displaying an increased resistance to the therapeutic intervention employed; (iii) requiring a greater need for reinforcement, or (iv) being subject to a greater range of dependency issues than their non-Arts, Music and Social Science and Humanities faculty peers. An alternative explanation is that Arts, Music and Social Science and Humanities faculty students did not possess an increased knowledge of the therapeutic process to more fully explore their presenting complaint – however this hypothesis is not supported by the result previously documented in Objective 2.

– Objective 3 versus Objective 4

It is notable that, in the non-abridged format, that both Arts and Social Science and Humanities faculty students occupy not only the two highest usage/utilisation rate per 1 000 students for psychological or psychiatric complaints presenting at the UCT-SHS-MHS but also two of the top three positions for the mean number of consultations required (behind Fine Art and Architecture faculty students). Conversely, Commerce faculty students are placed near the bottom of the list for both these Objective 3 and Objective 4-specific criteria. Therefore in this instance, unlike the example of race/population group and/or gender-specific variables as well as SeTswana first language speaking students in the non-abridged format of the language-specific variable, there is no apparent anomaly between these findings. Students registered in these respective faculties, therefore, are either subject to a high prevalence of mental disorders which require longer term psychotherapy or a low prevalence of these complaints which only require comparatively brief therapeutic intervention.

In the abridged format there is an association between usage/utilisation rate per 1 000 students and the mean number of consultations required for Arts, Music and Social Science and Humanities faculty students versus non- Arts, Music and Social Science and Humanities faculty students.

6.2.3.2 Level of study

Research Hypothesis VIa

Undergraduate students are more likely to present with mental disorders at the UCT-SHS-MHS than their postgraduate peers.

Research Hypothesis VIb

Undergraduate students are likely to require more consultations for mental disorders at the UCT-SHS-MHS than their postgraduate peers.

(a) Objective 1 (attendees)

(i) Patient-specific data

The following results were previously detailed in section 5.1.3.2:

- Table 5.123 demonstrates that, in the non-abridged format, Bachelors students were responsible for the greatest number of attendees at the UCT-SHS-MHS from 1991 to 1993 followed distantly by Honours degree, Masters degree, Postgraduate diploma, General diploma, other non-degree, Doctoral degree and Advanced diploma students.
- Table 5.124 demonstrates that, in the abridged format, there was a greater number of undergraduate students than postgraduate students (by 447,1 per cent) who attended the UCT-SHS-MHS from 1991 to 1993.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.4.2:

- No samples reported in the Literature Review recorded their findings according to the non-abridged level of study classification employed in the UCT-SHS study.
- The abridged format result is in agreement with nine of the 11 (81,8 per cent) level of study-specific samples quoted in the literature for developed (first world) countries that reported level of study-specific attendances.
- For attendance data, no sample reported the level of study-specific attendance data for developing (third world) countries.
- For attendance data, no sample reported the level of study-specific attendance data for Southern African countries.

It must be noted that the above level of study-specific results for UCT-SHS-MHS student attendees (patients) are descriptive statistics presented according to the number of student attendees, per se, rather than according to usage/utilisation rates per 1 000 students as used in Objective 3 which compares attendees to the total student community. Therefore, this finding of a greater number of undergraduate student attendees is mainly a factor related to the composition of the University of Cape Town student population rather than necessarily the demonstration of a student subset in great need of psychotherapeutic intervention.

(ii) Clinical/diagnostic-specific data

The following results were previously detailed in section 5.1.3.2:

- Tables 5.125 and 5.126 demonstrate that, in the abridged format, the above predominance of undergraduate students was maintained for all five major diagnostic categories as well as the five individual V-codes. Only "other" disorders produced a statistically significant (p=0,000) result in favour of undergraduate students.

As "other" disorders consist of a collection of widely differing mental disorders, it is not feasible to meaningfully reflect on possible reasons for their statistically significant overrepresentation in undergraduate

students. However, as in the case of non-Arts, Music and Social Science and Humanities faculty students, one theory could be that, for whatever reason, these students might either be more easily characterised as presenting with these various "other" disorders or, alternatively, prove more difficult to place into the other four major diagnostic categories than their generally older and, possibly more sophisticated, postgraduate peers.

(b) Objective 2 (patients versus controls)

The following results were previously detailed in section 5.1.3.2:

- Unadjusted ORs for patients versus controls have not been employed for the non-abridged format of the level of study-specific variable.
- Table 5.128 demonstrates that, in the abridged format, undergraduate students are not statistically more likely than postgraduate students to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the usage/utilisation. This finding rejects Research Hypothesis VIa of the UCT-SHS study.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.4.2:

- No sample quoted in the literature employed medical controls stratified by level of study and reported findings in the format employed in the UCT-SHS study (also refer to section 6.1.1.1(b)).

The above rejection of Research Hypothesis VIa of the UCT-SHS study suggests that, amongst UCT-SHS attendees, undergraduate students were not statistically more likely than postgraduate students to use the mental health service. There are at least two possible explanations for this finding: (i) a potentially inferior knowledge of the psychotherapeutic process and its benefits exists amongst the generally younger undergraduate student community, or (ii) undergraduate students might find the psychotherapeutic process more threatening than their postgraduate peers.

(c) Objective 3 (patients versus the total student community)

(i) Patient-specific data

The following results were previously detailed in section 5.1.3.2:

- Unadjusted ORs for patients versus the total student community have not been employed for the non-abridged format of the level of study-specific variable. However, Table 5.127 demonstrates and Figure 5.20 illustrates that the usage/utilisation rate per 1 000 students is highest for Bachelors degree students (50,6) followed by General diploma, Honours degree, Postgraduate diploma, Masters degree, Advanced diploma and Doctoral degree students (42,3; 28,6; 19,7; 17,2; 16,5 and 7,9, respectively).
- Table 5.129 demonstrates that, in the abridged format, undergraduate students are statistically more likely than postgraduate students to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than their representation of the student community would suggest. This finding confirms Research Hypothesis VIa of the UCT-SHS study. Likewise, Table 5.130 demonstrates and Figure 5.21 illustrates that

the usage/utilisation rate per 1 000 students is 154,0 per cent higher for undergraduate students at 50,3 compared to 19,8 for postgraduate students.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.4.2:

- No sample quoted in the literature employed non-mental health service attendees within the total student community as a set of controls stratified by level of study and reported findings in the format employed by the UCT-SHS study (also refer to section 6.1.1.1(c)). However, usage/utilisation rates per 1 000 students stratified by level of study were reported in the literature:
  - No samples reported in the Literature Review recorded their findings according to the non-abridged level of study classification employed in the UCT-SHS study.
  - The raised undergraduate student usage/utilisation rate, in the abridged format, is in agreement with neither of the level of study-specific samples quoted in the literature for developed (first world) countries. In the literature relating to undergraduate student usage/utilisation rates, again neither of the samples reported rates in excess of that recorded at the UCT-SHS-MHS from 1991 to 1993. On the other hand, in the literature detailing postgraduate student usage/utilisation rates, all five samples recorded rates greater than that documented at the UCT-SHS-MHS.
  - For usage/utilisation rate data, no sample reported the level of study-specific usage/utilisation rate per 1 000 students for developing (third world) countries.
  - For usage/utilisation rate data, no sample reported the level of study-specific usage/utilisation rate per 1 000 students for Southern African countries.

The above confirmation of Research Hypothesis VIa of the UCT-SHS study suggests that most of the observations made in section 3.3.3.2 of the Literature Review concerning possible reasons for increased undergraduate student usage of the mental health service were well founded. Therefore, these results suggest that:

(i) the transition from novice to skilled professional, scholar or performer is a demanding process (especially for historically disadvantaged Black students who derive from cultural backgrounds that are totally foreign to the Eurocentric orientation of the University) which can, indeed, lead to potentially serious adjustment problems, and

(ii) the financial burden of undergraduate fees can be a daunting proposition for the average (middle-class) student and his/her family which is further accentuated in the historically disadvantaged Black student and his/her family. The often overwhelming concern about raising the vast financial resources required to pursue, continue and eventually complete a tertiary education might, indeed, predispose these students to ongoing stress and anxiety disorders.

In addition, the Literature Review has noted that Pinkerton (1994) suggests the following additional causative factors could account for the underrepresentation of postgraduate students seen at the mental health service: (i) unwillingness to seek help (due to fear of not living up to an expectation – shared by the students and others – of greater self-sufficiency); (ii) greater use of denial, which may be a concomitant of men in the postgraduate student body, and (iii) accessibility factors.

– Objective 2 versus Objective 3

It is meaningful that, in the abridged format, Objective 2 of the level of study-specific variable did not record a statistically significant finding while Objective 3 did report one in favour of undergraduate students. The most likely reason for this somewhat anomalous finding is that undergraduate students, the majority of whom are less than 25 years of age, may be more willing to attend the UCT-SHS for various physical complaints while avoiding the UCT-SHS-MHS because of ignorance and/or fear of the psychotherapeutic process. On the other hand, postgraduate students, many of whom are greater than or equal to 25 years of age, generally being more aware of the psychological basis of certain physical complaints, may be more likely to directly approach the UCT-SHS-MHS for evaluation and/or therapeutic intervention. Therefore, undergraduate students attending the UCT-SHS for seemingly purely physical complaints should be gently asked about the presence of any underlying mental disorders so that they could, if necessary, be seen by the resident psychologists or psychiatrist at the UCT-SHS-MHS.

(ii) Clinical/diagnostic-specific data

The following results were previously detailed in section 5.1.3.2:

- Tables 5.131 and 5.132 demonstrate that, in the abridged format, the above raised usage/utilisation rate per 1 000 students for undergraduate students was maintained for all five major diagnostic categories as well as the five individual V-codes.

This result, as in the case of the patient-specific finding, suggests that the transition from school leaver to skilled professional, scholar or performer is a demanding process that can lead to a universal increase in mental disorders.

(d) Objective 4 (mean number of consultations)

The following results were previously detailed in section 5.1.3.2:

- Table 5.133 demonstrates that, in the non-abridged format, Masters degree students required the greatest mean number of consultations (5,0) at the UCT-SHS-MHS from 1991 to 1993 followed by Doctoral degree, Honours degree, Bachelors degree, General diploma, Advanced diploma and Postgraduate diploma students (4,0; 3,80; 3,79; 3,6; 3,0 and 2,8, respectively).
- Table 5.134 demonstrates that, in the abridged format, the mean number of consultations is higher for postgraduate students than undergraduate students (by 5,3 per cent) who attend the UCT-SHS-MHS from 1991 to 1993. This finding rejects Research Hypothesis VIb of the UCT-SHS study.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.4.2:

- No sample reported in the Literature Review documented their findings according to the non-abridged level of study classification employed in the UCT-SHS study.

- This raised postgraduate mean number of consultations, in the abridged format, is in agreement with both of the level of study-specific samples quoted in the literature for developed (first world) countries (Gibbs, 1975, for Black student attendees, and Gibbs, 1975, for non-Black student attendees, at Stanford University, USA). In the literature relating to mean number of undergraduate students consultations, only one of the two (50,0 per cent) samples reported a mean in excess of that recorded at the UCT-SHS-MHS from 1991 to 1993 (Gibbs, 1975, for Black student attendees at Stanford University, USA). On the other hand, in the literature detailing postgraduate student mean number of consultations, both of the samples documented means greater than that recorded at the UCT-SHS-MHS (Gibbs, 1975, as above).
- For mean number of consultation data, no sample reported the level of study-specific mean number of consultations for developing (third world) countries.
- For mean number of consultation data, no sample reported the level of study-specific mean number of consultations for Southern African countries.

The above rejection of Research Hypothesis VIb of the UCT-SHS study suggests that undergraduate students were not either: (i) suffering from more severe psychopathology; (ii) displaying an increased resistance to the therapeutic intervention employed; (iii) requiring a greater need for reinforcement, or (iv) being subject to a greater range of dependency issues than their postgraduate peers. A possible alternative explanation is that undergraduate students did not possess an increased knowledge of the therapeutic process (refer to Objective 2) to more fully explore their presenting complaint.

– Objective 3 versus Objective 4

It is notable that, in the non-abridged format, the three postgraduate degrees arranged in ascending order (viz. Honours, Masters and Doctoral degrees) were responsible for decreasing usage/utilisation rates per 1 000 students for psychological or psychiatric complaints presenting at the UCT-SHS-MHS while the reverse relationship (with the exception that Masters students were placed well above Doctoral students) applied to the mean number of consultations required by these students. Therefore, like the example of race/population group and/or gender-specific variables as well as SeTswana first language speaking students in the non-abridged format of the language-specific variable, there is again an apparent anomaly between these findings. This finding could, in this instance, be related to the fact that all Doctoral degree and the majority of Masters degree students registered at the University of Cape Town complete their studies by dissertation or thesis only. This arrangement might allow these students a significant degree of freedom to organise their study and leisure time to more comfortably accommodate the psychotherapeutic process and, thereby, more closely explore background factors that may have contributed to their presenting complaint.

In the abridged format there is no association between usage/utilisation rate per 1 000 students and the mean number of consultations required for undergraduate students versus postgraduate students.

6.2.3.3 Year of study

Research Hypothesis VIIa

First year students are more likely to present with mental disorders at the UCT-SHS-MHS than their non-first (02 to 06) year peers.

Research Hypothesis VIIb

First year students are likely to require more consultations for mental disorders at the UCT-SHS-MHS than their non-first (02 to 06) year peers.

(a) Objective 1 (attendees)

(i) Patient-specific data

The following results were previously detailed in section 5.1.3.3:

- Table 5.135 demonstrates that, in the non-abridged format, first year students were responsible for the greatest number of attendees at the UCT-SHS-MHS from 1991 to 1993 followed distantly by second year, third year, other year (generally students registered for a postgraduate degree by dissertation only), fourth year and jointly fifth and sixth year students.
- Table 5.136 demonstrates that, in the abridged format, there was a greater number of first year (freshman/fresher) students than non-first (02 to 06) year students (by 26,7 per cent) who attended the UCT-SHS-MHS from 1991 to 1993.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.4.3:

- Several samples reported in the Literature Review have recorded their findings according to the non-abridged year of study classification employed in the UCT-SHS study – although the vast majority are arranged according to the American four year college/university curriculum rather than the six year spread reported in the UCT-SHS study. Only four samples document the same year-specific decrease in student mental health services presentations – Frank and Kirk (1976) at the University of California, Berkeley, USA, Campus Counseling Center but not the corresponding Psychiatric Service of the Student Health Service; Naidoo (1997) for 01 to 12/1995 attendees at the University of the Western Cape; Sharp and Marra (1971) at the University of Wyoming, USA, and Uren, Conrad and Patterson (1973) at the US Military Academy at Westpoint, USA. The remaining samples either report a predominance of first year students followed by either second or fourth year students (Dunn et al., 1980, at the College Mental Health Center, Boston, USA, and Gibbs, 1975, for Black student attendees at Stanford University, USA) or mostly (five samples) record a predominance of second, third or fourth year students. Therefore only a minority of these results obtained from both developed (first world) and Southern African countries are compatible with those recorded at the UCT-SHS-MHS during a generally considerably later study period (except the two UWC samples).

- There are several possible reasons for this inconsistency but it would appear that students (especially historically disadvantaged Black students) attending both the University of Cape Town and the University of the Western Cape could require a prolonged period of time to adequately adjust to the complex academic and social demands of a tertiary educational institution that is often profoundly at odds with their cultural background. On the other hand, it would appear that students attending college/university in the USA (from whose mental health services the vast majority of samples are derived) are more likely to develop mental health problems toward the completion of their undergraduate careers when uncertainty concerning their non-academic future arise. The UCT-SHS-MHS result suggests that local students seem rather to concentrate their efforts on completing their academic studies before concerning themselves with their future careers. This approach could possibly lead to these students developing the mental health problems which affect their American peers in their later years of study only after they have left the relative support of the university environment. This could lead to considerable psychological morbidity and negatively impact upon their future careers. Other reasons relating to local factors affecting the different colleges/universities (e.g. the composition of the student body) could also be responsible for these different findings.
- The abridged format result is in agreement with four of the 17 (23,5 per cent) year of study-specific samples quoted in the literature for developed (first world) countries that reported year of study-specific attendances (Dunn et al., 1980, for postgraduate student attendees at the College Mental Health Center at Boston, USA; Frank and Kirk, 1976, for attendees at the Campus Counselling Center, University of California, Berkeley, USA; Frank and Kirk, 1976, for attendees at either the Campus Counselling Center or the Psychiatric Service at the Student Health Service at the University of California, Berkeley, USA, and U'ren, Conrad and Patterson, 1973, at the US Military Academy at Westpoint, USA).
- For attendance data, no sample reported the year of study-specific attendance data for developing (third world) countries.
- The abridged format result is not in agreement with either of the year of study-specific samples obtained from four Southern African universities.

It must be noted that the above year of study-specific results for UCT-SHS-MHS student attendees (patients) are descriptive statistics presented according to the number of student attendees, per se, rather than according to usage/utilisation rates per 1 000 students as used in Objective 3 which compares attendees to the total student community. Therefore, this finding of a greater number of first year (freshman/fresher) student attendees could be a factor related to the composition of the University of Cape Town student population rather than necessarily the demonstration of a student subset in great need of psychotherapeutic intervention – although, in this case, student demographics would not totally explain this phenomenon.

(ii) Clinical/diagnostic-specific data

The following results were previously detailed in section 5.1.3.3:

- Tables 5.137 and 5.138 demonstrate that, in the abridged format, the above predominance of first year (freshman/fresher) students was not maintained for all five major diagnostic categories with notable exceptions being affective disorder (tied) and anxiety (neurotic) disorder as well as the individual V-code of complicated bereavement. Only the individual V-code of complicated bereavement produced a statistically significant (p=0,015) result in favour of non-first (02 to 06) year students.

This result is somewhat unexpected as first year (freshman/fresher) students would seem prone to both affective disorders and, especially, anxiety (neurotic) disorders. The major adjustment required of the first year student to successfully meet the often exacting demands of the University must surely be associated with a great deal of anxiety and any failure to meet these often unrealistically high expectations – either real or imaginary – would inevitably, even if for a comparatively short-lived period, lead to some degree of depression in these students (refer to a summary of the freshman/matriculation myth, below, for further details).

The statistically significant overrepresentation of complicated bereavement in non-first (02 to 06) year students is difficult to explain but could be related to the fact that the vast majority of these students are, by definition, somewhat older than their first year peers with the result that their parents, in turn, are consequently older and possibly more prone to fatal illness.

(b) Objective 2 (patients versus controls)

The following results were previously detailed in section 5.1.3.3:

- Unadjusted ORs for patients versus controls have not been employed for the non-abridged format of the year of study-specific variable.
- Table 5.140 demonstrates that, in the abridged format, first year (freshman/fresher) students are not statistically more likely than non-first (02 to 06) year students to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS. This finding rejects Research Hypothesis VIIa of the UCT-SHS study.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.4.3:

- No sample quoted in the literature employed medical controls stratified by year of study and reported findings in the format employed in the UCT-SHS study (also refer to section 6.1.1.1(b)).

The above rejection of Research Hypothesis VIIa of the UCT-SHS study suggests that, amongst UCT-SHS attendees, first year (freshman/fresher) students were not statistically more likely than non-first (02 to 06) year students to use the mental health service. There are at least two possible explanations for this finding: (i) a potentially inferior knowledge of the psychotherapeutic process and its benefits exists amongst the generally younger first year community, or (ii) first year (freshman/fresher) students might find the psychotherapeutic process more threatening than their non-first (02 to 06) year peers.

(c) Objective 3 (patients versus the total student community)

(i) Patient-specific data

The following results were previously detailed in section 5.1.3.3:

- Unadjusted ORs for patients versus the total student community have not been employed for the non-abridged format of the year of study-specific variable. However, Table 5.139 demonstrates and Figure 5.22 illustrates that the usage/utilisation rate per 1 000 students is highest for second year students (57,3) followed by first year, third year, fourth year, fifth year and sixth year students (50,6; 33,4; 10,0; 5,5 and 3,7, respectively).
- Table 5.141 demonstrates that, in the abridged format, first year (freshman/fresher) students are statistically more likely than non-first (02 to 06) year students to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than their representation of the student community would suggest. This finding confirms Research Hypothesis VIIa of the UCT-SHS study. Likewise, Table 5.142 demonstrates and Figure 5.23 illustrates that the usage/utilisation rate per 1 000 students is 28,8 per cent higher for first year (freshman/fresher) students at 50,6 compared to 39,3 for non-first (02 to 06) year students.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.4.3:

- No sample quoted in the literature employed non-mental health service attendees within the total student community as a set of controls stratified by year of study and reported findings in the format employed by the UCT-SHS study (also refer to section 6.1.1.1(c)). However, usage/utilisation rates per 1 000 students stratified by year of study were reported in the literature:
  - As mentioned in the corresponding subdivision in Objective 1, five samples reported in the Literature Review recorded their findings according to the American four year college/university curriculum rather than the six year non-abridged level of study classification employed in the UCT-SHS study. All five samples recorded a raised usage/utilisation rate per 1 000 students in third year students. This finding was most pronounced in the studies documented by Craig, 1974, at an anonymous arts college in Baltimore, USA – although the first year rate was also considerably higher than that reported for second and fourth year students – and Reifler, Fox and Liptzin, 1967, for attendees from 06/56–05/57 at the University of North Carolina at Chapel Hill, USA. None of these samples (except the anonymous arts college in Baltimore) recorded a raised rate for either first or second year students.

    Possible reasons for this trend, which is the reverse of that reported at the UCT-SHS-MHS, could include the disproportionately increased number of local historically disadvantaged Black students requiring evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS during their first two years at the University. Their need for such therapy would be considerably reduced once they have managed to at least partially adjust to the foreign culture of the University. Another possible factor, previously outlined in the corresponding subdivision of Objective 1, relates to local students being less concerned with their non-academic future than their American peers. The corresponding subdivision, below, discussing the abridged format results raises further possible reasons for the increased usage/utilisation rates of first and second year students and decreased usage/utilisation rates of third year onwards students of the UCT-SHS-MHS.
  - The raised first year (freshman/fresher) student usage/utilisation rate, in the abridged format, is in agreement with only one (possibly two) of the seven (14,3 or 28,6 per cent) year of study-specific samples quoted in the literature for developed (first world) countries (Walters, 1970, for postgraduate student attendees at the University of Illinois, USA, and (possibly) Craig, 1974, at an Anonymous Arts College in Baltimore, USA – although third

year students report a higher usage/utilisation rate than first year (freshman/fresher) students). In the literature relating to first year (freshman/fresher) student usage/utilisation rates only one of the seven (14,3 per cent) samples reported rates in excess of that recorded at the UCT-SHS-MHS from 1991 to 1993 (Craig, 1974, as above). Similarly, in the literature detailing non-first (02 to 06) year student usage/utilisation rates, only one sample recorded rates greater than that documented at the UCT-SHS-MHS (Reifler, Liptzin and Fox, 1967, at the University of North Carolina at Chapel Hill, USA).

- For usage/utilisation rate data, no sample reported the year of study-specific usage/utilisation rate per 1 000 students for developing (third world) countries.
- For usage/utilisation rate data, no sample reported the year of study-specific usage/utilisation rate per 1 000 students for Southern African countries.

The above confirmation of Research Hypothesis VIIa of the UCT-SHS study suggests that most of the observations made in section 3.3.3.3 of the Literature Review concerning possible reasons for increased first year (freshman/fresher) student usage of the mental health service were well founded. Therefore, these results suggest that:

(i) the newfound social freedom combined with increased academic responsibility (compared to the high school environment) can serve to create a sense of confusion and self-doubt within the impressionable first year student (especially historically disadvantaged Black students who derive from cultural backgrounds that are totally foreign to the Eurocentric orientation of the University) which can, indeed, lead to potentially serious adjustment problems, and

(ii) the student who is considerably older than his/her peers (especially historically disadvantaged Black students who have often had to work for many years in order to earn and save sufficient capital to pursue, continue and eventually complete a tertiary education) is often subject to increased social and familial responsibilities that may, indeed, predispose these students to ongoing stress and anxiety disorders.

In addition, the student-related literature has detailed a special problem area in the adaptation to college/university affecting first year students referred to as the "freshman myth" (Stern, 1966 and 1970) or "matriculation myth" (Baker, McNeil and Siryk, 1985) which refers to the fact that, on the average, entering freshmen/freshers have expectations concerning college or university. More pronounced myth effect is associated with: (i) lesser participation in campus activities (Berdie, 1966); (ii) an increased likelihood of attending a mental health service (an agency offering psychodiagnostic and psychotherapeutic services to the college/university community) during the freshman/fresher year (Baker, McNeil and Siryk, 1985); (iii) poorer academic performance in college/university (Lauterbach and Vielhaber, 1966) – this finding could have relevance to historically disadvantaged and educationally underprepared Black students; (iv) more frequent change in major courses (Herr, 1971; Shaw, 1968); (v) a lesser likelihood of graduating on time (i.e. within eight semesters from matriculation or generally accepted course duration) (Baker, McNeil and Siryk, 1985), and (vi) a higher incidence of leaving college/university before graduation (Shaw, 1968). Likewise, Loeb and Magee (1992) note that college/university students are often moving from a high school where they achieved a good degree of success and received much approbation to an institution where their performance

is marked by less academic success and fewer accolades, at least in the beginning. Perhaps, the authors note, it is necessary to fall back, to lose some bravado and to experience doubt and conflict before one can experience growth.

– Objective 2 versus Objective 3

It is meaningful that, in the abridged format, Objective 2 of the year of study-specific variable did not record a statistically significant finding while Objective 3 did report one in favour of first year (freshman/fresher) students. The most likely reason for this somewhat anomalous finding is that first year (freshman/fresher) students may be more willing to attend the UCT-SHS for various physical complaints while avoiding the UCT-SHS-MHS because of ignorance and/or fear of the psychotherapeutic process. On the other hand, non-first (02 to 06) year students may be more aware of the psychological basis of certain physical complaints and, therefore, be more likely to directly approach the UCT-SHS-MHS for evaluation and/or therapeutic intervention. Therefore, first year students attending the UCT-SHS for purely physical complaints should be gently asked about the presence of any underlying mental disorders so that they could, if necessary, be seen by the resident psychologists or psychiatrist at the UCT-SHS-MHS.

(ii) Clinical/diagnostic-specific data

The following results were previously detailed in section 5.1.3.3:

- Tables 5.143 and 5.144 demonstrate that, in the abridged format, the above raised usage/utilisation rate per 1 000 students for first year (freshman/fresher) students was not maintained for all five major diagnostic categories with notable exceptions being anxiety (neurotic) disorder as well as the individual V-code of complicated bereavement.

As stated in Objective 1, this result is difficult to interpret and may be an age-related factor linked to possible increasing parental mortality.

(d) Objective 4 (mean number of consultations)

The following results were previously detailed in section 5.1.3.3:

- Table 5.145 demonstrates that, in the non-abridged format, fifth year students required the greatest mean number of consultations (6,0) at the UCT-SHS-MHS from 1991 to 1993 followed by second year, first year, fourth year, third year and sixth year students (4,0; 3,8; 3,5; 3,4 and 1,0, respectively). It must be noted that there was only one fifth and one sixth year student attendee during the study period which renders the above mean number of consultation figures highly suspect.
- Table 5.146 demonstrates that, in the abridged format, the mean number of consultations is fractionally higher for first year (freshman/fresher) students than non-first (02 to 06) year students (by less than one per cent) who attend the UCT-SHS-MHS from 1991 to 1993. This finding does not confirm Research Hypothesis VIIb of the UCT-SHS study as the t test appearing in Table 5.146 does not produce a statistically significant result.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.4.3:

- No sample quoted in the literature reported the year of study-specific mean number of consultations.

The above rejection of Research Hypothesis VIIb of the UCT-SHS study suggests that first year (freshman/fresher) students were not either: (i) suffering from more severe psychopathology; (ii) displaying an increased resistance to the therapeutic intervention employed; (iii) requiring a greater need for reinforcement, or (iv) being subject to a greater range of dependency issues than their non-first (02 to 06) year peers. A possible alternative explanation is that first year (freshman/fresher) students did not possess an increased knowledge of the therapeutic process (refer to Objective 2) to more fully explore their presenting complaint.

– Objective 3 versus Objective 4

It is notable that, in the non-abridged format, second year students are responsible for not only the highest usage/utilisation rate per 1 000 students for psychological or psychiatric complaints presenting at the UCT-SHS-MHS but also require the greatest mean number of consultations (if the highly suspect fifth year student figure is excluded). Therefore, like the example of Arts, Social Science and Humanities and Commerce faculty students in the non-abridged format of the faculty-specific variable (but contrary to race/population group and/or gender-specific variables as well as SeTswana first language speaking students in the non-abridged format of the language-specific variable), there is no apparent anomaly between these findings. The apparent association between increasing year of study (with the noteworthy exception of second year students) and a decreasing usage/utilisation rate per 1 000 students at the UCT-SHS-MHS is not maintained for the mean number of consultations required which bears no relationship to the year of study.

In the abridged format there is no association between usage/utilisation rate per 1 000 students and the mean number of consultations required for first year (freshman/fresher) students versus non-first (02 to 06) year students.

6.2.4 Residence (home address)

Research Hypothesis VIIIa

Students whose home address (as opposed to term address for out-of-town students) is outside metropolitan Cape Town are more likely to present with mental disorders at the UCT-SHS-MHS than their peers whose home address is within metropolitan Cape Town.

Research Hypothesis VIIIb

Students whose home address (as opposed to term address for out-of-town students) is outside metropolitan Cape Town are likely to require more consultations for mental disorders at the UCT-SHS-MHS than their peers whose home address is within metropolitan Cape Town.

6.2.4.1 Objective 1 (attendees)

(a) Patient-specific data

The following results were previously detailed in section 5.1.4:

- Table 5.147 demonstrates and Figure 5.24 illustrates that, in the non-abridged format for PCGs within metropolitan Cape Town, students whose home address is within the Greater Rondebosch area were responsible for the greatest number of attendees at the UCT-SHS-MHS from 1991 to 1993 followed by those who reside in City-Sea Point; Muizenberg-Ocean View, Maitland-Goodwood and the Greater Athlone area.
- Table 5.148 demonstrates that, in the non-abridged format for PCGs outside metropolitan Cape Town but within the Western Cape Health Region (WCHR), students whose home address is within the George-Cape West Coast region were responsible for the greatest number of attendees at the UCT-SHS-MHS from 1991 to 1993 followed by those who reside in Stellenbosch-Paarl-Franschhoek.
- Table 5.149 demonstrates that, in the non-abridged format for PCGs outside metropolitan Cape Town and outside the Western Cape Health Region (WCHR) but within South Africa, students whose home address is within the former Transvaal province were responsible for the greatest number of attendees at the UCT-SHS-MHS from 1991 to 1993 followed by those who reside in Natal and East London-Ciskei-Tembu.
- Table 5.150 demonstrates that, in the non-abridged format for African and non-African countries outside South Africa, students whose home address is within Zimbabwe were responsible for the greatest number of attendees at the UCT-SHS-MHS from 1991 to 1993 followed by those who reside in non-African countries and Mauritius.
- Table 5.151 demonstrates that, in the abridged format, students whose home address is outside metropolitan Cape Town and outside the WCHR but within South Africa were responsible for the greatest number of attendees at the UCT-SHS-MHS from 1991 to 1993 followed by those who reside in metropolitan Cape Town, African and non-African countries outside South Africa and outside metropolitan Cape Town but within the WCHR.
- Table 5.152 demonstrates that, in the highly abridged format, there was a greater number of students who reside outside metropolitan Cape Town than students who reside within metropolitan Cape Town (by 447,1 per cent) who attended the UCT-SHS-MHS from 1991 to 1993.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.5:

- As both the non-abridged and abridged residence (home address)-specific formats employed in the UCT-SHS study are unique to this country, it is not possible to compare these results to those reported in other countries that have a totally different geographical and socio-demographic distribution. In addition, no other sample reported in the Literature Review documented their findings according to any local or regional classification.
- No sample quoted in the literature reported the highly abridged format of residence (home address)-specific attendances.

It must be noted that the above residence (home address)-specific results for UCT-SHS-MHS student attendees (patients) are descriptive statistics presented according to the number of student attendees, per se, rather than according to usage/utilisation rates per 1 000 students as used in Objective 3 which compares attendees to the total student community. Therefore, this finding of a greater number of student attendees whose home address is outside metropolitan Cape Town could be a factor related to the composition of the University of Cape Town student population rather than necessarily the demonstration of a student subset in great need of psychotherapeutic intervention – although, in this case, student demographics would not explain this phenomenon.

(b) Clinical/diagnostic-specific data

The following results were previously detailed in section 5.1.4:

- Tables 5.153 and 5.154 demonstrate that, in the highly abridged format, the above predominance of students whose home address is outside metropolitan Cape Town was maintained for all five major diagnostic categories although the notable exception within the individual V-codes was family problem (tied). None of these disorders produced a statistically significant result in favour of either students whose home address is within metropolitan Cape Town or students whose home address is outside metropolitan Cape Town.

This result demonstrates that family problems would, as expected, appear more likely to develop if the student was living in close proximity to his/her relations. However, this commentary does not discount the very real crisis that must strike an out-of-town and, especially, up-country student when family problems do arise. The resultant sense of helplessness encountered in such a situation could possibly predispose these students to other serious disorders such as affective disorders or anxiety (neurotic) disorders.

6.2.4.2 Objective 2 (patients versus controls)

The following results were previously detailed in section 5.1.4:

- Table 5.155 demonstrates and Figure 5.25 illustrates that, in the non-abridged format for PCGs within metropolitan Cape Town, only students whose home address is within the Muizenberg-Ocean View area are statistically more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS while students who reside in Langa and Guguletu are statistically less likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS.
- Unadjusted ORs for patients versus controls have not been employed for the non-abridged format of the residence (home address)-specific variable for PCGs outside metropolitan Cape Town but within the Western Cape Health Region (WCHR).
- Unadjusted ORs for patients versus controls have not been employed for the non-abridged format of the residence (home address)-specific variable for PCGs outside metropolitan Cape Town and outside the Western Cape Health Region (WCHR) but within South Africa.
- Unadjusted ORs for patients versus controls have not been employed for the non-abridged format of the residence (home address)-specific variable for African and non-African countries outside South Africa.

- Tables 5.161 and 5.164 demonstrate that, in the abridged format, only students whose home address is within metropolitan Cape Town (conventional format) and students whose home address is within metropolitan Cape Town versus students who reside outside metropolitan Cape Town and outside the WCHR but within South Africa and in African and non-African countries outside South Africa (matrix format) are statistically more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS while students who reside outside metropolitan Cape Town and outside the WCHR but within South Africa and in African and non-African countries outside South Africa (conventional format) and students who reside outside metropolitan Cape Town but within the WCHR versus students whose home address is outside metropolitan Cape Town and outside the WCHR but within South Africa and students who reside outside metropolitan Cape Town and outside the WCHR but within South Africa versus students whose home address is in African and non-African countries outside South Africa (matrix format) are statistically less likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS.
- Table 5.166 demonstrates that, in the highly abridged format, students whose home address is outside metropolitan Cape Town are statistically less likely than students whose home address is within metropolitan Cape Town to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS. This finding rejects Research Hypothesis VIIIa of the UCT-SHS study.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.5:

- No sample quoted in the literature employed medical controls stratified by residence (home address) and reported findings in the format employed in the UCT-SHS study (also refer to section 6.1.1.1(b)).

The above rejection of Research Hypothesis VIIIa of the UCT-SHS study would suggest that, amongst UCT-SHS attendees, students whose home address is outside metropolitan Cape Town were significantly less likely than students whose home address is within metropolitan Cape Town to use the mental health service. There are at least two possible explanations for this finding: (i) a potentially inferior knowledge of the psychotherapeutic process and its benefits exists amongst the out-of-town student community, or (ii) students whose home address is outside metropolitan Cape Town might find the psychotherapeutic process more threatening than their peers whose home address is within metropolitan Cape Town.

6.2.4.3 Objective 3 (patients versus the total student community)

(a) Patient-specific data

The following results were previously detailed in section 5.1.4:

- Table 5.156 demonstrates and Figure 5.26 illustrates that in the non-abridged format for PCGs within metropolitan Cape Town, only students whose home address is within Nyanga East and the Greater Rondebosch area are statistically more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS while students who reside in Parow-Blackheath and the Greater Wynberg area are statistically less likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical

complaints at the UCT-SHS. Likewise, Table 5.157 demonstrates and Figures 5.27 and 5.28 illustrate that the usage/utilisation rate per 1 000 students is highest for students whose home address is within Nyanga East (96,8) followed by students who reside in Khayelitsha, Mitchells Plain, Guguletu and Langa (61,5; 47,6; 42,6 and 41,1, respectively).

- Unadjusted ORs for patients versus the total student community have not been employed for the non-abridged format of the residence (home address)-specific variable for PCGs within metropolitan Cape Town but within the Western Cape Health Region (WCHR). However, Table 5.158 demonstrates and Figure 5.29 illustrates that the usage/utilisation rate per 1 000 students is highest for students whose home address is within the George-West Coast region (45,2) followed by students who reside in Stellenbosch-Paarl-Franschhoek (29,4).
- Unadjusted ORs for patients versus the total student community have not been employed for the non-abridged format of the residence (home address)-specific variable for PCGs outside metropolitan Cape Town and outside the Western Cape Health Region (WCHR) but within South Africa. However, Table 5.159 demonstrates and Figure 5.30 illustrates that the usage/utilisation rate per 1 000 students is highest for students whose home address is within the East London-Ciskei-Tembu region (69,4) followed by students who reside in the Orange Free State and the former Transvaal province (67,4 and 65,4, respectively).
- Unadjusted ORs for patients versus the total student community have not been employed for the non-abridged format of the residence (home address)-specific variable for African and non-African countries outside South Africa. However, Table 5.160 demonstrates and Figure 5.31 illustrates that the usage/utilisation rate per 1 000 students is highest for students whose home address is within Zambia (142,9) followed by students who reside in Swaziland and Lesotho (83,3 and 75,9, respectively).
- Tables 5.162 and 5.165 demonstrate that, in the abridged format, only students whose home address is outside metropolitan Cape Town and outside the WCHR but within South Africa (conventional format) are statistically more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS while students who reside within metropolitan Cape Town and outside metropolitan Cape Town but within the WCHR (conventional format) and students whose home address is within metropolitan Cape Town versus students who live outside metropolitan Cape Town but within the WCHR, outside metropolitan Cape Town and outside the WCHR but within South Africa and within African and non-African countries outside South Africa (matrix format) are statistically less likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS. Likewise, Table 5.163 demonstrates and Figure 5.32 illustrates that the usage/utilisation rate per 1 000 students is highest for students whose home address is outside metropolitan Cape Town and outside the WCHR but within South Africa (60,8) followed by students residing within African and non-African countries outside South Africa, within metropolitan Cape Town and outside metropolitan Cape Town but within the WCHR (34,2; 30,0 and 24,2, respectively).
- Table 5.167 demonstrates that, in the highly abridged format, students whose home address is outside metropolitan Cape Town are statistically more likely than students whose home address is within metropolitan Cape Town to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than their representation of the student community would suggest. This finding confirms Research Hypothesis VIIIa of the UCT-SHS study. Likewise, Table 5.168 demonstrates and Figure 5.33 illustrates that the usage/utilisation rate per 1 000 students is 70,3 per cent higher for students whose home address is outside metropolitan Cape Town at 51,1 compared to 30,0 for students whose home address is within metropolitan Cape Town.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.5:

- No sample quoted in the literature employed non-mental health service attendees within the total student community as a set of controls stratified by residence (home address) and reported findings in the format employed by the UCT-SHS study (also refer to section 6.1.1.1(c)). However, usage/utilisation rates per 1 000 students stratified by residence (home address) were reported in the literature:
  - No samples reported in the Literature Review recorded their findings according to any non-abridged (local) or abridged (regional) residence (home address) classification.
  - This raised out-of-town student usage/utilisation rate is, in the highly abridged format, in agreement with both of the residence (home address)-specific samples quoted in the literature for developed (first world) countries (Maclay, 1967, for especially international (foreign) students at the University of Birmingham, UK, and Walters, 1970, at the University of Illinois, USA). In the literature relating to locally resident student usage/utilisation rates neither of the samples reported rates in excess of that recorded at the UCT-SHS-MHS from 1991 to 1993. Likewise, in the literature detailing out-of-town student usage/utilisation rates, neither of the samples recorded rates greater than that documented at the UCT-SHS-MHS.
  - For usage/utilisation rate data, no sample reported the residence (home address)-specific usage/utilisation rate per 1.000 students for developing (third world) countries.
  - For usage/utilisation rate data, no sample reported the residence (home address)-specific usage/utilisation rate per 1 000 students for Southern African countries.

The above confirmation of Research Hypothesis VIIIa of the UCT-SHS study suggests that most of the observations made in section 3.3.4 of the Literature Review concerning possible reasons for increased usage of the mental health services by students whose home address is outside metropolitan Cape Town were well founded. Therefore, these results suggest that:

(i) the student residing in either University-administered residences or private lodgings far from home separated from most of their immediate family and friends (especially Black students removed from their cultural roots which are completely foreign to the Eurocentric culture of the University) could, indeed, be predisposed to potentially serious adjustment problems, and

(ii) the older student (many of whom are Black students who are separated from most of their immediate family and dependants is often subject to increased social and familial responsibilities that may not always be able to be satisfactorily resolved. These often complex financial issues may force the student (especially if he/she is considered to be the head of the family) to interrupt his/her studies to return home to provide the necessary direct familial support, thereby potentially, indeed, predisposing these students to ongoing stress and anxiety disorders.

In addition, the Literature Review has reported that Wright-Short (1967) notes living away from home enhances feelings of insecurity and the student may, consequently, experience loneliness and doubt, rather than the delight of freedom which was anticipated. Indeed, Rosecan, Fuqua and Blum (1992) suggest that first year and second year students may be more vulnerable to the psychological aspects of separating from the home setting since leaving home and familial loved ones to attend college/university represents, for most

late adolescents, the longest and most significant separation of their lives. This can, according to the authors, create and exacerbate vulnerabilities in students who are at risk for psychological problems.

The transitional social-support-stress-buffering hypothesis (Barrera et al., 1981; Leavy, 1983; McCormick et al., 1987; Sandler and Barrera, 1984) states that transition to a new environment requires one to meet the demands of many previously unfamiliar people, tasks and situations (Sykes and Eden, 1985). How well individuals cope with such stresses is a function, not only of personal coping mechanisms, but also of the number and strength of the individual's support systems – individuals who experience significant life stress, but who have strong social support, are protected from developing symptomology associated with stress (Gore, 1978; Hirsch, 1980; Sandler and Barrera, 1984). Furthermore, international (foreign) students face a phenomenon known as "uprooting disorders" characterised by disorientation, nostalgic-depressive reactions, feelings of isolation and feelings of alienation (Taft, 1977, quoted by Essandoh, 1995). This author mentions that the difficulty in adjustment is often magnified by the size of the gap between the familiar culture and the unfamiliar culture. (This concept is extremely relevant for upcountry students, especially those from a historically disadvantaged background, who are separated from their family and cultural support structures.)

(i) Objective 2 versus Objective 3

It is extremely noteworthy that, in the highly abridged format, the statistically significant findings recorded in Objectives 2 and 3 of the residence (home address)-specific variable favour students whose home address is within metropolitan Cape Town and students whose home address is outside metropolitan Cape Town, respectively. The most likely reason for this anomalous finding is that students whose home address is outside metropolitan Cape Town, possibly because of the lack of a local private medical practitioner or on the basis of cultural factors and/or ignorance and fear of the psychotherapeutic process, may be more likely to attend the UCT-SHS and/or somatise their psychological or psychiatric complaints, and thereby, present there for various psychosomatic/psychophysiological disorders rather than the UCT-SHS-MHS for their underlying mental disorder. On the other hand, students whose home address is within metropolitan Cape Town, because of the availability of a local private medical practitioner and other possible factors leading to a general increased awareness of the psychological basis of certain physical complaints, may be more likely to directly approach the UCT-SHS-MHS for evaluation and/or therapeutic intervention.

(b) Clinical/diagnostic-specific data

The following results were previously detailed in section 3.3.5:

- Tables 5.169 and 5.170 demonstrate that, in the highly abridged format, the above raised usage/utilisation rate per 1 000 students for students whose home address is outside metropolitan Cape Town was maintained for all five major diagnostic categories as well as the five individual V-codes.

This result, as in the case of the patient-specific finding, suggests that being separated from most of one's immediate family and friends can lead to an increase in all mental disorders.

6.2.4.4 Objective 4 (mean number of consultations)

The following results were previously detailed in section 5.1.4:

- Table 5.171 demonstrates and Figure 5.34 illustrates that, in the non-abridged format for PCGs within metropolitan Cape Town, students whose home address is within Nyanga East required the greatest mean number of consultations (6,3) at the UCT-SHS-MHS from 1991 to 1993 followed by students who reside in Langa and Observatory-Woodstock (5,7 and 5,0, respectively). It must be noted that there were only three student attendees from Nyanga East during the study period which renders the above mean number of consultation figures somewhat suspect.
- Table 5.172 demonstrates that, in the non-abridged format for PCGs outside metropolitan Cape Town but within the Western Cape Health Region (WCHR), students whose home address is within the Stellenbosch-Paarl-Franschhoek region required the greatest mean number of consultations (6,0) at the UCT-SHS-MHS from 1991 to 1993 followed by students who reside in Eerste Rivier-Grabouw-Bredasdorp (3,4).
- Table 5.173 demonstrates that, in the non-abridged format for PCGs outside metropolitan Cape Town and outside the Western Cape Health Region (WCHR) but within South Africa, students whose home address is within the Lamberts Bay-Springbok-Alexander Bay region required the greatest mean number of consultations (10,0) at the UCT-SHS-MHS from 1991 to 1993 followed by students who reside in Port Elizabeth-Cape Midwest and the Orange Free State (4,2 and 4,1, respectively). It must be noted that there was only one student attendee from the Lamberts Bay-Springbok-Alexander Bay region during the study period which renders the above mean number of consultation figure highly suspect.
- Table 5.174 demonstrates that, in the non-abridged format for African and non-African countries outside South Africa, this set of analyses, with the exception of Namibia, has not been performed (for technical reasons) for this particular grouping of countries.
- Table 5.175 demonstrates that, in the abridged format, students whose home address is within African and non-African countries outside South Africa required the greatest mean number of consultations (4,8) at the UCT-SHS-MHS from 1991 to 1993 followed by students who reside within metropolitan Cape Town, outside metropolitan Cape Town but within the WCHR, and outside metropolitan Cape Town and outside the WCHR but within South Africa (3,8; 3,7 and 3,6, respectively).
- Table 5.177 demonstrates that, in the highly abridged format, the mean number of consultations is fractionally higher for students whose home address is outside metropolitan Cape Town than students whose home address is within metropolitan Cape Town (by less than one per cent) who attend the UCT-SHS-MHS from 1991 to 1993. This finding does not confirm Research Hypothesis VIIIb of the UCT-SHS study as the ANOVA appearing in Table 5.176 does not produce a statistically significant result.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.5:

- No sample quoted in the literature reported the residence (home address)-specific mean number of consultations.

The above rejection of Research Hypothesis VIIIb of the UCT-SHS study suggests that students whose home address is outside metropolitan Cape Town were not either: (i) suffering from more severe psychopathology; (ii) displaying an increased resistance to the therapeutic intervention employed; (iii) requiring a greater need for reinforcement, or (iv) being subject to a greater range of dependency issues than their peers whose home address is within metropolitan Cape Town. An alternative explanation is that students whose home address

is outside metropolitan Cape Town did not possess an increased knowledge of the therapeutic process (refer to Objective 2) to explore their presenting complaint more fully.

(a) **Objective 3 versus Objective 4**

It is notable that, in the non-abridged format for PCGs within metropolitan Cape Town, students whose home address is within Nyanga East (despite the above reservation) are responsible for not only the highest usage/utilisation rate per 1 000 students for psychological or psychiatric complaints presenting at the UCT-SHS-MHS but also require the greatest mean number of consultations. Therefore, like the example of Arts, Social Science and Humanities and Commerce faculty students in the non-abridged format of the faculty-specific variable and second year students in the non-abridged format of the year of study-specific variable, there is no apparent anomaly between these findings. However, students residing in Khayelitsha, Mitchells Plain and Guguletu who all recorded high usage/utilisation rates, reported contrastingly low values for the mean number of consultations required at the UCT-SHS-MHS. Accordingly, in this case, like the instance of the race/population group and/or gender-specific variables as well as SeTswana first language speaking students in the non-abridged format of the language-specific variable, there is indeed an anomaly between these Objective 3 and Objective 4-specific criteria. These three latter PCGs consist of historically disadvantaged African (Khayelitsha and Guguletu) and Coloured (Mitchells Plain) suburbs characterised by adverse socio-demographic indicators (refer to brief outline of selected suburbs of metropolitan Cape Town included in section 6.2.4.5 below). Consequently, these residence (home address)-specific subcategories within metropolitan Cape Town are directly linked to the African and Coloured subcategories of the race/population group and/or gender-specific variables characterising UCT-SHS-MHS attendees.

There appears, in the non-abridged format for PCGs outside metropolitan Cape Town but within the Western Cape Health Region (WCHR), to be no clear relationship between the usage/utilisation rate per 1 000 students for psychological or psychiatric complaints presenting at the UCT-SHS-MHS and the mean number of consultations required at the UCT-SHS-MHS.

It is notable that, in the non-abridged format for PCGs outside metropolitan Cape Town and outside the Western Cape Health Region (WCHR) but within South Africa, that students whose home address is within the Orange Free State are responsible for not only the second highest (after the East London-Ciskei-Tembu region) usage/utilisation rate per 1 000 students for psychological or psychiatric complaints presenting at the UCT-SHS-MHS but also require the second greatest (if the highly suspect Lamberts Bay-Springbok-Alexander Bay resident student figure is excluded) mean number of consultations. Therefore, like the example of Arts, Social Science and Humanities and Commerce faculty students in the non-abridged format of the faculty-specific variable, second year students in the non-abridged format of the year of study-specific variable and Nyanga East resident students within metropolitan Cape Town, there is no apparent anomaly between these findings.

It is not possible to comment, in the non-abridged format for African and non-African countries outside South Africa, on the relationship between the usage/utilisation rate per 1 000 students for psychological or psychiatric complaints presenting at the UCT-SHS-MHS and the mean number of consultations required at the UCT-SHS-MHS.

The apparent association, in the abridged format, between increasing distance between home address and the University (with the noteworthy exception of students residing in African and non-African countries outside South Africa) and a decreasing mean number of consultations required by students presenting with psychological or psychiatric complaints at the UCT-SHS-MHS is not maintained for the usage/utilisation rate per 1 000 students of the UCT-SHS-MHS which bears no relationship to the residence (home address) of the student. In this example, like the instance of the race/population group and/or gender-specific variables as well as SeTswana first language speaking students in the non-abridged format of the language-specific variable and Khayelitsha, Mitchells Plain and Guguletu resident students within metropolitan Cape Town, there does appear to be an anomaly between these Objective 3 and Objective 4-specific criteria. The reason for this finding is unclear and should be further investigated. This would ensure that out-of-town students would receive optimal attention for their presenting psychological or psychiatric complaints. An interesting subsidiary analysis would have been to determine the proportion of students residing outside metropolitan Cape Town who are historically disadvantaged students to assess whether there is any further linkage between residence (home address) and the African and Coloured subcategories of the race/population group and/or gender-specific variables characterising UCT-SHS-MHS attendees.

In the highly abridged format there is an association between usage/utilisation rate per 1 000 students and the mean number of consultations required for students whose home address is within metropolitan Cape Town versus students who reside outside metropolitan Cape Town.

6.2.4.5 Further commentary concerning PCGs and suburbs within metropolitan Cape Town

Table 6.8 depicts various demographic, socio-demographic and health indicators relating to the traditionally African and Coloured PCGs (including some of their individual suburbs) within metropolitan Cape Town. Therefore, these PCG/suburb-specific details correspond to populations who were historically the most disadvantaged by the previous dispensation. However, it must be noted that not all people were equally affected by apartheid insofar as Rylands can be considered to represent one of the least disadvantaged Black areas. Consequently, this suburb within the Greater Athlone area (PCG No. 22) has been included in the table as a control group that approximates the socio-demographic and health-related conditions prevailing in the White suburbs. While it is acknowledged that these statistics are not contemporaneous with the UCT-SHS study period, they do coincide, however, with the formative childhood years of the majority of students attending the University of Cape Town between 1991 and 1993. Therefore, instead of representing a constraint, this information is highly relevant as it is now a generally accepted fact that adverse childhood

circumstances (which would be readily apparent in this series of indicators) may lead to subsequent mental disorders in adulthood.

Demographic data, obtained from Patel (1984) in a statistical summary and analysis of socio-economic trends for local areas, includes background overall and paediatric (into which the vast majority of students attending the UCT-SHS-MHS during the study period would fall) population figures in order to assess the relative contribution of the various PCGs and their suburbs to the population of metropolitan Cape Town (circa 950 000 in 1983). The socio-demographic data probably constitute the most important indicators relevant to the hypothesis of there being an association between adverse childhood circumstances and the subsequent presentation at the UCT-SHS-MHS with psychological or psychiatric complaints. This data consists of a summary of both the socio-economic group and housing type predominating in the relevant PCGs and selected suburbs as obtained from Household (1985) in his thesis outlining the epidemiology, clinical features, aetiology and course of acute infectious diarrhoea in infants (a potentially preventable disease that does have an extremely strong correlation to prevailing adverse socio-economic conditions). A further important indicator of adverse living conditions is the average monthly income detailed by Patel (1984) which constitutes the prime consideration behind the awarding of UCT-administered financial aid to disadvantaged students (refer to section 6.2.5 for further details). The final statistics address both the suburban and domestic population densities – insofar as the population per hectare figures as well as the number of people living in each habitable room per dwelling are detailed for all the relative suburbs with the notable exception of Crossroads which, in the early 1980s, was still a developing informal settlement that had not been adequately assessed by municipal authorities.

The health-related findings consist of results relevant to these PCGs/suburbs detailed by Michael Rip of the UCT Department of Community Health in three separate articles (Rip, Roux and Roberts, 1986, investigating birth and fertility rate variations in metropolitan Cape Town; Rip, Keen and Kibel, 1986, documenting the medical geography of the perinatal mortality in metropolitan Cape Town, and Rip, Keen and Woods, 1987, determining intra-urban variations of neonatal and post-neonatal mortality in a developing city). The authors note that: (i) numerous studies at both the international and national levels indicate that population growth is influenced by, inter alia, economic development and social and family structures and functions (Rip, Roux and Roberts, 1986); (ii) it is generally accepted that variations in perinatal mortality rates (PNMRs) are associated with socio-economic conditions and patterns of well-being (Rip, Keen and Kibel, 1986), and (iii) the infant mortality rate (IMR) is usually recognised as an important indicator of the level of socio-economic development of the entire population (Rip, Keen and Woods, 1987). Therefore, these health indicators serve to yet further profile the generally adverse conditions affecting students growing up in these historically disadvantaged communities to highlight additional background factors that may have contributed to them attending the UCT-SHS-MHS for evaluation and/or therapeutic intervention.

The results previously detailed and briefly discussed in the non-abridged format describing students whose home address is within metropolitan Cape Town have reported that Nyanga East and Khayelitsha (whose details are not recorded in Table 6.8 as it, like Crossroads, in the early to mid 1980s was still a developing

informal settlement that had not been adequately assessed by either municipal authorities or, in this case, scientific researchers) were the only two PCGs to report a usage/utilisation rate of greater than 50 per 1 000 students. The PCG of Nyanga East consists of the individual suburbs of Crossroads and Nyanga which are both medium-sized suburbs (although the figure quoted for Crossroads, in particular, probably represents a gross under-enumeration of the population) characterised not only by level III (lowest) socio-economic group status but also by the two lowest average monthly incomes reported amongst a collection of historically disadvantaged communities. Nyanga consists of a collection of rented sub-economic housing units – several of which are former all-male hostels that have been converted into so-called family units – while Crossroads is a squatter camp that had very few amenities in the early 1980s. Nyanga records the highest population density of people living in each habitable room per dwelling – this is a figure that could possibly be exceeded by people living in the squatter shacks of Crossroads and Khayelitsha. Population density per hectare is the only socio-demographic indicator documented for Nyanga that, compared to the other disadvantaged suburbs, does not occupy the lowest position or range – although the population density of people per habitable room would probably offset any tangible benefits that this statistic might bestow. However, the squatter camps of Crossroads and Khayelitsha would, if figures were available for them, most likely report the highest population density per hectare due to the extremely close proximity of the individual shacks to each other. Crossroads is characterised by the joint highest birth rate (with Langa) and the joint highest fertility rate (with Elsies River and Langa) together with the highest infant mortality rates (with the sole exception of Heideveld for the PNMR per 1 000 births) whereas Nyanga documents health-related indicators that are compatible with the rest of the historically disadvantaged areas.

Therefore these socio-demographic and health-related indicators relating to the individual suburbs of Crossroads and Nyanga together with the usage/utilisation rate per 1 000 students documented for the PCG of Nyanga East confirm the hypothesis that adverse childhood circumstances do appear to be associated with a subsequent increased presentation of psychological or psychiatric complaints at the UCT-SHS-MHS. This finding is strongly in keeping with the clinical observation outlined in the rationale (refer to section 1.3) that historically disadvantaged (and educationally underprepared) Black students appear to be more predisposed to certain mental disorders than students from advantaged backgrounds. Certain contributory reasons for this phenomenon have been proposed in this subdivision (also refer to Figure 6.4 below for further details).

Figure 6.4 Schematic diagram depicting the relationship between the demographic, socio-demographic and health indicators relating to the traditionally African and Coloured PCGs (including some of their individual suburbs) within metropolitan Cape Town.

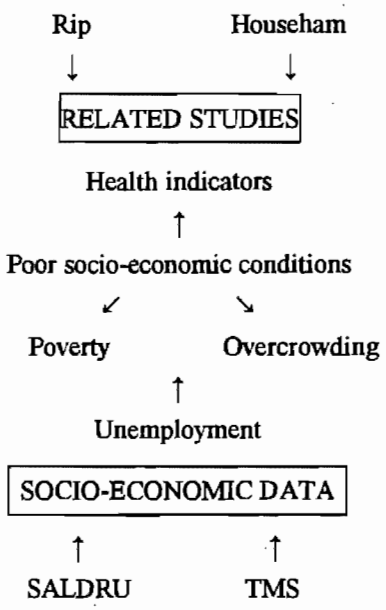


Table 6.8 Demographic, socio-demographic and health-related characteristics of selected Postal Code Groupings (PCGs) and suburbs within metropolitan Cape Town.

PCG within metropolitan Cape Town	Individual suburb	Population[1]	Population 0-14 years[1]	Socio-economic group[1]	Average monthly income[1]	Housing type[2]	Density – pop/hectare[3]	Population density/ dwelling/ habitable room[1]	Birth rate/1 000[4]	Fertility rate/1 000[4]	PNMR/ 1 000 births[5]	NNMR/ 1 000 births[6]	PNNMR/ 1 000 births[6]
Code No. 15: Maitland-Goodwood	Elsies River	55 180	21 220	IIb/III	R184,77	2+	100 – 200	1,81	35,0 – 44,9	170,0 – 453,0	20,0 – 29,9	10,0 – 19,9	10,0 – 19,9
Code No. 19: Langa	Langa	33 320	4 580	III	R145,34	+	100 – 200	1,81	>45,0	170,0 – 453,0	30,0 – 39,9	10,0 – 19,9	10,0 – 19,9
Code No. 20: Guguletu	Guguletu	74 760	22 940	III	R138,06	+/*	100 – 200	2,22	25,0 – 34,9	140,0 – 169,9	20,0 – 29,9	10,0 – 19,9	30,0 – 40,0
Code No. 21: Nyanga East	Crossroads	31 940	14 680	III	R117,55	2	-	-	>45,0	170,0 – 453,0	30,0 – 39,9	10,0 – 19,9	30,0 – 40,0
	Nyanga	24 220	6 340	III	R132,22	+	50 – 100	2,62	25,0 – 34,9	140,0 – 169,9	20,0 – 29,9	10,0 – 19,9	10,0 – 19,9
Code No. 22: Greater Athlone	Athlone	14 460	4 980	IIa	R237,59	1*	50 – 100	1,67	25,0 – 34,9	140,0 – 169,9	10,0 – 19,9	<10,0	<10,0
	Bonteheuwel	47 060	16 900	IIb	R176,06	+/*	100 – 200	2,14	25,0 – 34,9	100,0 – 139,9	30,0 – 39,9	10,0 – 19,9	10,0 – 19,9
	Hanover Park	35 740	14 540	IIb	R193,10	+	100 – 200	2,12	25,0 – 34,9	100,0 – 139,9	20,0 – 29,9	10,0 – 19,9	10,0 – 19,9
	Heideveld	16 480	5 400	IIb	R200,60	+/*	50 – 100	1,99	25,0 – 34,9	100,0 – 139,9	>40,0	10,0 – 19,9	<10,0
	Manenberg	37 660	14 640	IIb	R176,79	+	100 – 200	2,19	25,0 – 34,9	140,0 – 169,9	30,0 – 39,9	10,0 – 19,9	10,0 – 19,9
	Rylands Estate	1 620	560	I	R326,75	1	10 – 50	1,20	25,0 – 34,9	40,0 – 99,9	20,0 – 29,9	10,0 – 19,9	<10,0
Code No. 23: Mitchells Plain	All suburbs	63 760	27 960	I/IIa	R288,28	1	10 – 50	1,37	25,0 – 34,9	100,0 – 139,9	10,0 – 19,9	10,0 – 19,9	<10,0
Code No. 27: Muizenberg-Ocean View	Retreat	58 560	22 660	-	R189,02	1+	50 – 100	1,98	25,0 – 34,9	100,0 – 139,9	20,0 – 29,9	10,0 – 19,9	<10,0

References appearing in Table:
[1]Patel (1984); [2]Household (1985); [3]City of Cape Town – TMS Report, 1982; [4]Rip, Roux and Roberts (1986); [5]Rip, Keen and Kibel (1986); [6]Rip, Keen and Woods (1987).

Abbreviations appearing in Table:
PNMR – Perinatal mortality rate
NNMR – Neonatal mortality rate
PNNMR – Post neonatal mortality rate

Socio-economic groups appearing in Table:
I: Highest socio-economic group
II: Middle socio-economic group – (a) Semi-skilled workers; (b) Unskilled workers
III: Lowest socio-economic group – often unemployed/unskilled

Housing types appearing in Table:
+Rented sub-economic housing; *Rented economic housing; 1 Owner occupied building; 2 Squatter camp/slum area

6.2.5 Financial Assistance

Research Hypothesis IXa

Students who are receiving UCT-administered financial aid are more likely to present with mental disorders at the UCT-SHS-MHS than their peers who are either ineligible for or not receiving UCT-administered financial aid.

Research Hypothesis IXb

Students who are receiving UCT-administered financial aid are likely to require more consultations for mental disorders at the UCT-SHS-MHS than their peers who are either ineligible for or not receiving UCT-administered financial aid.

6.2.5.1 Objective 1 (attendees)

(a) Patient-specific data

The following results were previously detailed in section 5.1.5:

- Table 5.178 demonstrates that, in the non-abridged format, students who are ineligible for and not receiving UCT-administered financial aid were responsible for the greatest number of attendees at the UCT-SHS-MHS from 1991 to 1993 followed by those who received between R5 000 and R9 999, less than R5 000, between R10 000 and R14 999 and greater than or equal to R15 000.
- Table 5.179 demonstrates that, in the abridged format, there was a greater number of students who are either ineligible for or not receiving UCT-administered financial aid than students who are receiving UCT-administered financial aid (by 198,7 per cent) who attended the UCT-SHS-MHS from 1991 to 1993.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.6:

- No sample reported in the Literature Review recorded their findings according to either the non-abridged or abridged financial assistance classification employed in the UCT-SHS study. This is somewhat surprising with the increasing number of historically disadvantaged minority students attending college/university in the USA that none of the more recent (i.e. late 1980s and 1990s) studies have addressed this issue.

It must be noted that the above financial assistance-specific results for UCT-SHS-MHS attendees (patients) are descriptive statistics presented according to the number of student attendees, per se, rather than according to usage/utilisation rates per 1 000 students as used in Objective 3 which compares attendees to the total student community. Therefore, this finding of a greater number of student attendees who are either ineligible for or not receiving UCT-administered financial aid could be a factor related to the composition of the University of Cape Town student population rather than necessarily the demonstration of a student subset in great need of psychotherapeutic intervention.

The above confirmation of Research Hypothesis IXa of the UCT-SHS study suggests that most of the observations made in section 3.3.5 of the Literature Review concerning possible reasons for increased usage of the mental health service by students who are receiving UCT-administered financial aid were well founded. Therefore, these results suggest that the student who is receiving UCT-administered financial aid comprises the least advantaged sector of the University community as these grants are awarded according to strict criteria that are directly linked to combined family income. Often, as this financial aid is not sufficient to cover University fees, these students (especially historically disadvantaged Black students who are subject to increased social and familial responsibilities) are subject to overwhelming concern about raising the vast financial resources required to pursue, continue and eventually complete a tertiary education which may, indeed, predispose these students to ongoing stress and anxiety disorders.

In addition, it has been reported in the Literature Review that Hawarden (1985 and 1992) notes the lack of money is the most pressing problem experienced by Black students at the University of the Witwatersrand and that there is an increasing number of students who do not have the material means to equip themselves for their studies – a situation which perpetuates the cycle of disadvantage. (There is no reason to believe that the situation relating to students attending the University of Cape Town is any different to this scenario.) Factors associated with lack of finances include: (i) not having money to buy books; (ii) financial worries about families, and (iii) having to work part-time (Selikow, 1994). This author states that financial insecurity adversely affects academic performance insofar as these students may be uncertain whether they will even be able to attend University the following year. Furthermore, Selikow (1994) observes that having a bursary does not, in itself, preclude financial difficulty. Indeed, Agar (1989) reports that bursaries do not cover all academic or personal financial expenses and often bursary money only becomes available well into the first term, thereby causing students to experience anxiety in this regard. Most Black students interviewed by Selikow (1994) spoke of the fear of failure which could result in a loss of bursaries and exclusion from the University leading to high levels of stress. The above UCT-SHS-MHS result certainly confirms this finding.

(i) Objective 2 versus Objective 3

It is meaningful that, in the abridged format, Objective 2 of the financial assistance-specific variable did not record a statistically significant finding while Objective 3 did report one in favour of students receiving UCT-administered financial assistance. The most likely reason for this somewhat anomalous finding is that students receiving UCT-administered financial assistance, the vast majority of whom are historically disadvantaged Black (especially African) students, may be more likely to somatise their psychological or psychiatric complaints and, thereby, attend the UCT-SHS for various psychosomatic/psychophysiological disorders rather than the UCT-SHS-MHS for their underlying mental disorder. On the other hand, students who are ineligible for and not receiving UCT-administered financial assistance, the vast majority of whom are White students, generally being more aware of the psychological basis of certain physical complaints, may be more likely to directly approach the UCT-SHS-MHS for evaluation and/or therapeutic intervention.

(b) Clinical/diagnostic-specific data

The following results were previously detailed in section 5.1.5:

- Tables 5.186 and 5.187 demonstrate that, in the abridged format, the above raised usage/utilisation rate per 1 000 students for students who are receiving UCT-administered financial aid maintained for all five major diagnostic categories as well as the five individual V-codes.

This result, as in the case of the patient-specific finding, suggests that being economically disadvantaged and subject to financial concerns can lead to a universal increase in mental disorders.

6.2.5.4 Objective 4 (mean number of consultations)

The following results were previously detailed in section 5.1.5:

- Table 5.188 demonstrates that, in the non-abridged format, students receiving greater than or equal to R15 000 of UCT-administered financial aid required the greatest mean number of consultations (6,1) at the UCT-SHS-MHS from 1991 to 1993 followed by students receiving less than R5 000, between R10 000 and R14 999, no (ineligible) and between R5 000 and R9 999 UCT-administered financial aid (3,88; 3,87; 3,8 and 3,3, respectively).
- Table 5.189 demonstrates that, in the abridged format, the mean number of consultations is higher for students who are either ineligible for or not receiving UCT-administered financial aid than for students who are receiving UCT-administered financial aid (by 2,7 per cent) who attended the UCT-SHS-MHS from 1991 to 1993. This finding rejects Research Hypothesis IXb of the UCT-SHS study.

The following are apparent when the above results are compared to the samples previously documented in section 3.3.6:

- No sample quoted in the literature reported the financial assistance-specific mean number of consultations.

The above rejection of Research Hypothesis IXb of the UCT-SHS study suggests that students who are receiving UCT-administered financial aid were not either: (i) suffering from more severe psychopathology; (ii) displaying an increased resistance to the therapeutic intervention employed; (iii) requiring a greater need for reinforcement, or (iv) being subject to a greater range of dependency issues than their peers who are either ineligible for or not receiving UCT-administered financial aid. A possible alternative explanation is students who are receiving UCT-administered financial aid could have been impeded by their decreased knowledge of the therapeutic process (refer to Objective 2) to prevent them from fully exploring their presenting complaint.

(a) Objective 3 versus Objective 4

It is notable that, in the non-abridged format, students who are receiving greater than or equal to R15 000 of UCT-administered financial aid not only require the greatest mean number of consultations at the UCT-SHS-MHS for psychological or psychiatric complaints but also record the second highest (after students receiving between R10 000 and R14 999) usage/utilisation rate per 1 000 students at the UCT-SHS-MHS. Therefore,

like the example of Arts, Social Science and Humanities and Commerce faculty students in the non-abridged format of the faculty-specific variable, second year students in the non-abridged format of the year of study-specific variable and Nyanga East resident students within metropolitan Cape Town, there is no apparent anomaly between these findings. However, the apparent association between increasing value of UCT-administered financial assistance (with the noteworthy exception of students receiving greater than or equal to R15 000) and an increasing usage/utilisation rate per 1 000 students presenting at the UCT-SHS-MHS with psychological or psychiatric complaints is not maintained for the mean number of consultations required by students at the UCT-SHS-MHS which bears no relationship to the value of UCT-administered financial aid received by the student. In this particular example, like the instance of the race/population group and/or gender-specific variables as well as SeTswana first language speaking students in the non-abridged format of the language-specific variable, Khayelitsha, Mitchells Plain and Guguletu resident students within metropolitan Cape Town and the abridged format of the residence (home address)-specific variable, there does appear to be an anomaly between these Objective 3 and Objective 4-specific criteria. The majority of students receiving this UCT-administered financial assistance are historically disadvantaged Black students like the students residing in the above three PCGs which consist of suburbs characterised by adverse socio-demographic indicators (refer to section 6.2.4.5 for a brief outline of selected suburbs of metropolitan Cape Town). As this financial aid is granted according to strict criteria based upon joint family income, students receiving the higher levels of assistance would be the most disadvantaged in the student body.

In the abridged format there is no association between usage/utilisation rate per 1 000 students and the mean number of consultations required for students who are receiving UCT-administered financial aid versus students who are either ineligible for or not receiving UCT-administered financial aid.

6.2.6 Summary of Selected Variables

6.2.6.1 Objective 1 (attendees)

(a) Patient-specific data

The following are apparent when the attendee-specific results previously detailed in Chapter 5 are compared to samples previously documented in the Literature Review for the selected demographic, academic, residential (home address) and financial assistance variables employed in the UCT-SHS study:

- On the one hand, the UCT-SHS-MHS results, bearing in mind the introductory comments initially appearing in section 6.2.1.2(a), suggest that male students and non-first (02 to 06) year students, relative to female and first year (freshman/fresher) students, respectively, appear to attend the UCT-SHS-MHS less frequently than their corresponding peers in other college/university mental health services elsewhere in the world.
- On the other hand, the UCT-SHS-MHS results, again bearing in mind the introductory comments initially appearing in section 6.2.1.2(a), suggest that White students (only in developed (first world) countries), students less than 25 years of age, non-Arts, Music and Social Science and Humanities faculty students and undergraduate students, relative to their remaining peers, do NOT appear to present at the UCT-SHS-MHS less frequently than their corresponding peers in other college/university mental health services elsewhere in the world.

- However, there are either no samples or too few samples quoted in the literature in order to form a meaningful comparison between the UCT-SHS-MHS results for race/population group and gender combined, language, residence (home address) and financial assistance and students attending other tertiary educational institution mental health services in either developed (first world), developing (third world) or Southern African countries.

Possible reasons, either in addition to or independent of the composition of the student body, have already been raised in the respective variable-specific discussions in an attempt to explain the predominance of particular student subsets amongst presentations at the UCT-SHS-MHS during the study period. It is possible, indeed probable, that demographic changes effected within the student community subsequent to 1993 as a direct consequence of the ongoing transformation process affecting the University has resulted in a substantial alteration in the profile of UCT-SHS-MHS attendees. Therefore, a greater proportion of students currently attending the University would be non-English first language speaking Black students who are eligible for UCT-administered financial aid. It would, therefore, be a most useful exercise to conduct follow-up research to characterise students currently presenting at the UCT-SHS-MHS in order to accurately assess the impact of these rapid changes affecting the student body on UCT-SHS-MHS attendance patterns.

(b) Clinical/diagnostic-specific data

There has already been fairly extensive speculation in the respective variable-specific discussions to explain why particular student subsets amongst UCT-SHS-MHS attendees during the study period were either more or less likely to be affected by various mental disorders. These causative factors, for the variables of race/population group, race/population group and gender combined and financial assistance, in particular, often relate to background cultural or adverse socio-economic circumstances existing in the different sectors of the total student community which may predispose many of these students to present at the UCT-SHS-MHS with various psychological or psychiatric complaints for evaluation and/or therapeutic intervention.

6.2.6.2 Objective 2 (patients versus controls)

Possible reasons have already been raised in the respective variable-specific discussions to explain why, amongst UCT-SHS attendees, particular student subsets were either significantly more or less likely to use the mental health service during the study period. These causative factors largely relate to variations in the degree of knowledge and/or comfort with the psychotherapeutic process existing within the different sectors of the total student community already attending the UCT-SHS for medical complaints. Therefore, an increased level of awareness amongst these students of the benefits to be derived from this process would, in all likelihood, promote attendance at the UCT-SHS-MHS whereas, on the other hand, ignorance and fear of the procedures involved would, in turn, lead to reluctance in seeking assistance for underlying psychological or psychiatric complaints. The UCT-SHS should consequently actively promote the concept of mental health within the student community and the role of the UCT-SHS-MHS in assisting students to reduce, inter alia, their levels of stress. Such preventive health education programmes should be specifically targeted at the student subsets which recorded statistically significant ORs of less than 1,0 for Objective 2 (i.e. students who selectively underutilise the mental health service relative to medical service). This measure may help to

timeously alleviate potentially career-threatening mental disorders in notable UCT-SHS-MHS underutilisers such as historically disadvantaged and educationally underprepared Black students who, due to the legacy of apartheid, are already at increased risk of academic failure and exclusion from the University on academic grounds.

6.2.6.3 Objective 3 (patients versus the total student community)

(a) Patient-specific data

The following are apparent when the usage/utilisation rate-specific results previously detailed in Chapter 5 are compared to samples previously documented in the Literature Review for the selected demographic, academic, residential (home address) and financial assistance variables employed in the UCT-SHS study:

- On the one hand, the UCT-SHS-MHS results, bearing in mind the introductory comments initially appearing in section 6.2.1.2(a), suggest that White students, postgraduate students and non-first (02 to 06) year students, relative to Black, undergraduate and first year (freshman/fresher) students, respectively, appear to utilise the UCT-SHS-MHS less frequently than their corresponding peers in other college/university mental health services elsewhere in the world.
- On the other hand, the UCT-SHS-MHS results, again bearing in mind the introductory comments initially appearing in section 6.2.1.2(a), suggest that female students (only in developed (first world) and Southern African countries), Arts, Music and Social Science and Humanities faculty students and out-of-town students, relative to their remaining peers, do NOT appear to present at the UCT-SHS-MHS less frequently than their corresponding peers in other college/university mental health services elsewhere in the world.
- However, there are either no samples or too few samples quoted in the literature in order to form a meaningful comparison between the UCT-SHS-MHS results for race/population and gender combined, age, language and financial assistance and students attending other tertiary educational institution mental health services in either developed (first world), developing (third world) or Southern African countries.
- Furthermore, in comparing absolute usage/utilisation rates per 1 000 students, male students, both Black and White students (three samples only), non-Arts, Music and Social Science and Humanities faculty students and postgraduate students, relative to students attending other college/university mental health services elsewhere in the world, appear to underutilise the UCT-SHS-MHS as reflected by generally lower usage/utilisation rates per 1 000 students whereas female students, Arts, Music and Social Science and Humanities faculty students, undergraduate students, both first year (freshman/fresher) and non-first (02 to 06) year students and both local and out-of-town students (two samples only) do NOT appear to underutilise the UCT-SHS-MHS.

  It must, however, be noted that comparatively few of the samples supplying basic descriptive data quoted in Objective 1 provided additional usage/utilisation rates that could be quoted in this objective with the result that these trends based on absolute rates are highly suspect as they are extremely difficult to contextualise. However, from these two sets of comparisons, despite these reservations, it does become apparent that certain subsets of students within the total UCT student community either do not seem to derive maximum benefit from the UCT-SHS-MHS or are not prone to the same prevalence of mental disorders as their peers in predominantly developed (first world) countries. The former scenario would appear to be the more likely, which would suggest that the UCT-SHS-MHS may not successfully cater to the diverse individual needs of all members of the student body. This possibility should be further investigated so that this important student service-orientated facility might be able to deliver a service that is relevant to the vast majority of students registered at the University of Cape Town. Otherwise, in the wake of

unattended mental disorders within various sectors of the student community, the UCT-SHS-MHS would clearly fail to address the UCT Mission Statement, which commits the University to promote equal opportunity and the full development of human potential.

Possible reasons have already been raised in the respective variable-specific discussions to explain why, amongst students registered at the University of Cape Town, particular student subsets were either significantly more or less likely to use the mental health service during the study period. These reasons largely relate to background cultural and socio-economic factors that affect these students. There are, however, variable subcategories relating to the individual stated Research Hypotheses that are closely linked insofar as the classification of non-English first language speaking students and students who are receiving UCT-administered financial assistance as well as a substantial proportion of students greater than or equal to 25 years of age (viz. non-traditionally aged undergraduate students) overwhelmingly refer to historically disadvantaged Black students. Therefore these subsets of students are, by definition, subject to the same set of adverse family and financial circumstances that could promote the development of various mental disorders while they are attending the University. Indeed, there is a potential linkage between 11 of the 12 non-abridged format variable subcategories recording the highest usage/utilisation rates per 1 000 students at the UCT-SHS-MHS during the study period. The relevant race/population group and gender, language and residence (home address)-specific subcategories all directly refer to historically disadvantaged African students (including those living in other Southern African countries) attending the University. In addition, it is also a recognised fact that the more academically accomplished scholars who attended the former DET (Department of Education and Training) schools were permitted to write their matriculation examinations at an unusually early age thereby leading to the emergence of a number of under aged university entrants lacking the necessary social skills to successfully integrate into these tertiary educational institutions.

(i) Objective 2 versus Objective 3

Table 6.9 provides a summary of the relationship that exists between Objective 2 and Objective 3-specific ORs for abridged/highly abridged (for age and residence (home address)-specific variables) format results previously detailed in Chapter 5 for the selected demographic, academic, residential (home address) and financial assistance variables employed in the UCT-SHS study.

Table 6.9 Status of unadjusted ORs obtained for Objective 2 (patients versus controls) and Objective 3 (patients versus the total student community) for selected demographic, academic, residential (home address) and financial assistance variables.

Variable	Objective 2 OR status	Objective 3 OR status
Gender		
Males	-	-
Females	+	+
Race/population group[1]		
Blacks (A,C,I)	0	+
Whites	0	-
Race/population group[1] and gender		
Black (A,C,I) males	-	-
Black (A,C,I) females	+	+
White males	-	-
White females	+	+
Black (A,C,I) males	+	+
White males	-	-
Black (A,C,I) females	-	+
White females	+	-
Black (A,C,I) males	-	+
White females	+	-
Black (A,C,I) females	+	+
White males	-	-
Age		
<25	0	+
≥25	0	-
Language		
English	+	-
Non-English	-	+
Faculty		
Arts, Music and Social Science and Humanities faculties	+	+
Non-Arts, Music and Social Science and Humanities faculties	-	-
Level of study		
Undergraduate	0	+
Postgraduate	0	-
Year of study		
First year	0	+
Non-first year	0	-
Residence (home address)		
Within metropolitan Cape Town	+	-
Outside metropolitan Cape Town	-	+
Financial assistance		
Eligible	0	+
Ineligible/DNA[2]	0	-

[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
[2]DNA = Did not apply for financial aid – the vast majority of these students would be ineligible for and not receiving financial assistance as the availability of financial aid to financially disadvantaged students (who would qualify for financial aid) is widely advertised both on (and off) campus.

Abbreviations appearing in Table:
+ Statistically significant OR in favour of this subcategory.
- Statistically significant OR NOT in favour of this subcategory.
0 Statistically insignificant OR

Possible reasons have already been raised in the respective variable-specific discussions to explain why the subsets of students reporting statistically significant ORs for both Objectives 2 and 3 are more likely to seek therapeutic intervention at the UCT-SHS-MHS than make use of the medical facilities provided at the UCT-SHS as well as selectively present at the UCT-SHS-MHS with psychological or psychiatric complaints. The most likely factor is that these students have a greater understanding and knowledge of the psychotherapeutic process than their peers and are consequently more willing to seek assistance for underlying mental disorders. On the other hand, it is noteworthy that, with the single exception of the home address (residence)-specific variable, all the variable-specific subcategories reporting a statistically significant OR in their favour for Objective 3 correspond to historically disadvantaged Black students. These students, although they clearly appear to be subject to a significant burden of mental illness as confirmed by both the Objective 3 OR and the corresponding high usage/utilisation rate per 1 000 students, still seem to prefer seeking assistance for possible psychosomatic and other stress-related conditions at the UCT-SHS rather than the UCT-SHS-MHS. Various cultural factors that may influence their decision concerning which healthcare facility to consult have previously been raised in the various race/population group-specific discussions. It is therefore important that the UCT-SHS-MHS should launch a concerted health promotion campaign to inform the subsets of students who selectively do not attend this student service-orientated facility about the benefits to be derived from their counselling service.

(b) Clinical/diagnostic-specific data

There has already been fairly extensive speculation in the respective variable-specific discussions, as in the case of Objective 1, to explain why particular student subsets registered at the University of Cape Town were either more or less likely to present with various mental disorders at the UCT-SHS-MHS during the study period. As previously mentioned in Objective 1, these causative factors, for the variables of race/population group, race/population group and gender combined and financial assistance, in particular, often relate to background cultural or adverse socio-economic circumstances affecting students registered at the University of Cape Town during the study period which may predispose many of these students to various psychological or psychiatric complaints. These conditions, in turn, may or may not lead to presentation at the UCT-SHS-MHS for evaluation and/or therapeutic intervention.

6.2.6.4 Objective 4 (mean number of consultations)

Possible reasons have already been raised in the respective variable-specific discussions in an attempt to explain the need of particular student subsets to require longer-term psychotherapy at the UCT-SHS-MHS during the study period. These causative factors largely relate to the initial severity of psychopathology existing within the different sectors of the total student community, the level of resistance encountered by the student to the psychotherapeutic process employed, the need of the student for positive reinforcement from the resident therapist and the range of dependency issues affecting the student seeking evaluation and/or therapeutic intervention at the UCT-SHS-MHS for underlying psychological or psychiatric complaints. It is highly likely that additional cultural factors could also play an important role in deciding the length of

treatment that students may require for their presenting complaints insofar as the predominantly White female and middle-class UCT-SHS-MHS therapists may have difficulty in recognising the true nature of the initial presenting complaint in students whose culture is different to their own. This may severely retard the evaluation process and result in an undue delay in making the appropriate clinical diagnosis which may, in turn, curtail the initiation of suitable therapeutic intervention in the subset of students who are most likely to be severely functionally impaired by these disorders. In addition, the response of the individual student to the treatment offered – often measured by the number of consultations required in order to effect a satisfactory improvement in the student's functional capacity – can often be considered as a reflection of the competence of the therapist to deliver a service that is truly appropriate to the diverse needs of the multi-cultural society that currently exists within the University. Indeed, as in the case of usage/utilisation rates per 1 000 students at the UCT-SHS-MHS, there is a potential linkage between four of the ten non-abridged format variable subcategories recording the highest mean number of consultations per student at the UCT-SHS-MHS during the study period. Several of the relevant residence (home address)-specific subcategories and the financial assistance-specific subcategory directly refer to historically disadvantaged African students (including those living in other Southern African countries) attending the University.

(a) Objective 3 versus Objective 4

Table 6.10 provides a summary of the relationship that exists between usage/utilisation rate per 1 000 students and mean number of consultations for abridged/highly abridged (for age and residence (home address)-specific variables) format results previously detailed in Chapter 5 for the selected demographic, academic, residential (home address) and financial assistance variables employed in the UCT-SHS study.

Table 6.10 Usage/utilisation rate per 1 000 students (Objective 3) and mean number of consultations per student (Objective 4) for selected demographic, academic, residential (home address) and financial assistance variables.

Variable	Usage/utilisation rate per 1 000 students	Mean number of consultations
Gender		
Males	28,0	3,4
Females	54,4	4,1
Race/population group[1]		
Blacks (A,C,I)	58,2	3,6
Whites	30,2	4,0-
Race/population group[1] and gender		
Black (A,C,I) males	45,9	3,3
Black (A,C,I) females	75,9	3,9
White males	19,5	3,5
White females	44,8	4,3
Black (A,C,I) males	45,9	3,3
White males	19,5	3,5
Black (A,C,I) females	75,9	3,9
White females	44,8	4,3
Black (A,C,I) males	45,9	3,3
White females	44,8	4,3

Black (A,C,I) females	75,9	3,9
White males	19,5	3,5
Age		
<25	44,0	3,7
≥25	28,6	4,0
Language		
English	33,9	3,9
Non-English	55,9	3,5
Faculty		
Arts, Music and Social Science and Humanities faculties	68,5	4,0
Non-Arts, Music and Social Science and Humanities faculties	27,6	3,7
Level of study		
Undergraduate	50,3	3,8
Postgraduate	19,8	4,0
Year of study		
First year	50,6	3,4
Non-first year	39,3	3,6
Residence (home address)		
Within metropolitan Cape Town	30,0	3,8
Outside metropolitan Cape Town	51,1	3,8
Financial assistance		
Eligible	100,3	3,7
Ineligible/DNA[2]	32,4	3,8

[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
[2]DNA = Did not apply for financial aid – the vast majority of these students would be ineligible for and not receiving financial assistance as the availability of financial aid to financially disadvantaged students (who would qualify for financial aid) is widely advertised both on (and off) campus.

Possible reasons have already been raised in the respective variable-specific discussions to explain why certain subsets of students do and others do not report an association between usage/utilisation rate per 1 000 students and the mean number of consultations required at the UCT-SHS-MHS. The former group of students are more likely to selectively present at the UCT-SHS-MHS with psychological or psychiatric complaints as well as more likely to seek (or need) longer-term psychotherapy for their underlying mental disorder. The most likely factor, as in the case of those variables reporting statistically significant ORs for both Objectives 2 and 3, is that these students have a greater understanding and knowledge of the psychotherapeutic process than their peers and are consequently more willing to both seek and, if necessary, continue receiving assistance for underlying mental disorders. It is noteworthy that female students and Arts, Music and Social Science and Humanities faculty students for the variables of gender and faculty, respectively, as well as several of the race/population group and gender combinations recorded statistically significant ORs for both Objectives 2 and 3 as well as an association between usage/utilisation rate per 1 000 students and the mean number of consultations required by students at the UCT-SHS-MHS. Therefore, these students would appear to represent subsets within the student body who are particularly *au fait* with the role of the UCT-SHS-MHS in both addressing the cause and alleviating the effects of psychological or psychiatric complaints. In turn, they could be encouraged to highlight, amongst their peers, the benefits to be derived from attending this student service-orientated facility. These students could thereby encourage their less informed and more reticent peers to address mental health problems that, if left untreated, could seriously jeopardise their university careers. On the other hand, it is notable that, with the exceptions of the level of

study and year of study-specific variables, all the variable-specific subcategories reporting no association between usage/utilisation rate per 1 000 students and the mean number of consultations required at the UCT-SHS-MHS correspond to historically disadvantaged Black students. (It has previously been suggested that these students, many of whom have been forced to defer their studies due to financial constraints, constitute a large proportion of the (undergraduate) non-traditionally aged student community). These students, who clearly appear to be subject to a significant burden of mental illness as confirmed by the high usage/utilisation rate per 1 000 students, either do not appear to be assessed by the resident therapists as requiring longer term and more intensive psychotherapy (an unlikely scenario) or do not seem willing to accept such longer term psychotherapy. Various cultural factors that have previously been detailed in the Literature Review may possibly influence their commitment to continue receiving ongoing therapy. It is therefore important that the UCT-SHS-MHS should launch a concerted health promotion campaign to inform such subsets of students who either do not attend or do not derive maximum benefit from this student service-orientated facility about the benefits to be derived from their counselling service.

6.2.7 Multivariate Relationships

> *Applied statisticians study data generated from random systems with the aim of quantifying the inherent uncertainty in the observations and teasing out patterns that may not be immediately obvious. The procedure, quite generally, is to construct an idealised mathematical representation (or model) of the system being studied and then to examine the degree to which the model conforms to the observed data.*
>
> (WHO, 1983: p. 284)

This statement provides an appropriate introduction to this subsection which will address the most important findings detailed in the models developed for both the patient-specific data (refer to section 5.2.1 for further details) and the clinical/diagnostic-specific data (refer to section 5.2.2 and Appendix VIII for further details) for Objective 2 (patients versus controls) and Objective 3 (patients versus the total student community). These models consist of the nine selected demographic, academic, residential (home address) and financial assistance variables employed in this study to investigate their relationship to student presentation with psychological or psychiatric complaints at the UCT-SHS-MHS. (This total rises to thirteen variables if the major subcategories of race/population group and residence (home address) are included in the model.)

A function of investigating the nature of multivariate relationships (as well as bivariate relationships – refer to sections 6.2.1 to 6.2.6 for further discussion) can be to demonstrate the presence of risk factors (Kraemer et al., 1997). As stated above, the variables explored in the multivariate modelling discussed in this subsection are the selected demographic, academic, residential (home address) and financial assistance variables that have been used in section 5.1 to characterise students (the population) presenting with psychological or psychiatric complaints at the UCT-SHS-MHS (the outcome). A risk factor, which tends to be more robust if it is preserved in a multivariate relationship once the influence of other variables is taken into account, is defined as follows:

- language (English first language speaking students)
  [according to the classification appearing in section 4.3.1 this is a "relatively immutable factor" while the risk factor status proposed by Kraemer et al. (1997) label this variable as either a variable marker or a causal risk factor depending on whether manipulation of this factor changes the outcome of UCT-SHS-MHS attendance]
  - This subcategory of the demographic variable of language is difficult to relate to the other variables, although the corresponding subcategory of non-English first language speaking students, as employed in this study, is closely related to race/population group insofar as virtually all the non-English first language speaking students (with the exception of a few non-African international students) are Black students. This subcategory of the race/population group-specific variable, in turn, is related to the variable of financial assistance (the majority of recipients of UCT-administered financial aid are historically disadvantaged Black students) and is also possibly related to age (many Black students, due to financial constraints, are forced to defer the commencement of their tertiary education until they have managed to accumulate sufficient funds to permit them to register at the University), faculty (it is conceivable that there is a racial bias in the choice of faculty), level of study (at the time of this study, which coincided with the early stages of the transformation process currently affecting the University, there were comparatively few Black postgraduate students) and year of study (as many of these students, due to the educational inequalities existing in South Africa's education system, are educationally underprepared for the often exacting academic demands of a tertiary education, it is feasible that a disproportionate number of Black students are excluded from the University at the end of their first year on academic grounds).
- faculty (Arts, Music and Social Science and Humanities faculty students)
  [according to the classification appearing in section 4.3.2 this is a "mutable factor" while the risk factor status proposed by Kraemer et al. (1997) label this variable as either a variable marker or a causal risk factor depending on whether manipulation of this factor changes the outcome of UCT-SHS-MHS attendance]
  - This subcategory of the academic variable of faculty is possibly related to other variables such as gender (it is possible that gender stereotyping may contribute to the choice of faculty adopted by students, viz. Social Science and Humanities faculty may be viewed as catering to the preferences of female students whereas Engineering faculty may be considered to favour the propensities of male students), race/population group (there may be a racial bias in the choice of faculty), level of study (one faculty grouping may have more postgraduate students than the other) and year of study (it is possible that one faculty grouping may have a higher first year student intake with a correspondingly higher exclusion rate at the end of the first year than the other – it is a known fact that, in the past, Arts faculty adopted such a strategy).
- the residence (home address) subcategory of students who reside within metropolitan Cape Town
  [according to the classification appearing in section 4.3.3 this is a "relatively immutable factor" while the risk factor status proposed by Kraemer et al. (1997) label this variable as either a variable marker or a causal risk factor depending on whether manipulation of this factor changes the outcome of UCT-SHS-MHS attendance].
  - This non-abridged format subcategory of the residence (home address) variable is difficult to relate to the other variables. However, it is conceivable that a series of underlying relationships do exist between this variable subcategory and the remaining eight (excluding the combined race/population group and gender-specific variable) variables employed in this study.

This paragraph attempts to clarify the risk factor status of variables that could be classified as either a variable marker or a causal risk factor. The Literature Review has previously highlighted academic problems affecting students who are forced to study in a language other than their first language (e.g. Friedenberg and Curry (1981) and Ngwenya (1990) – refer to section 3.3.3.5 for further details). Therefore language would appear to strongly fulfil the role of a causal risk factor insofar as remedial steps taken to improve linguistic

competence amongst non-English first language speaking students should result in improved academic performance which should lead to a reduction in academic-related stress which, in turn, could result in fewer mental disorders requiring evaluation and/or therapeutic intervention at the UCT-SHS-MHS. Likewise, issues confronting students living away from home – as opposed to those living at or near home as documented above – have also been raised (the transitional social-support-stress-buffering hypothesis (Barrera et al., 1981; Leavy, 1983; McCormick et al., 1987; Sandler and Barrera, 1984) would be most relevant to out-of-town students who are separated from their family and friends while "uprooting disorders" characterised by disorientation, nostalgic-depressive reactions, feelings of isolation and feelings of alienation (Taft, 1977, quoted by Essandoh, 1995) would apply to international (foreign) students who are often also separated from their cultural roots – refer to section 3.3.5 for further details). Therefore, under these circumstances, residence (home address) would also appear to strongly fulfil the role of a causal risk factor although remedial steps would prove somewhat more difficult to institute – however, these students should receive additional assistance to facilitate their adjustment to their new, and often threatening, environment. Such steps, if successfully implemented, should in this case lead to a reduction in adjustment-related stress which, in turn, could result in fewer mental disorders requiring evaluation and/or therapeutic intervention at the UCT-SHS-MHS. However, it is less clear – indeed, somewhat doubtful – whether this risk factor status is maintained for students who reside within metropolitan Cape Town in the immediate or near proximity of their family and friends. In addition, remedial measures to specifically address the needs of local students (as opposed to out-of-town students) are less clearly apparent. On the other hand, the prospective student is generally free to choose the faculty in which he/she wishes to study – these choices are often influenced by the particular propensities, personality and character of the student (e.g. Boor (1975) and Dann (1964) – refer to section 3.3.4.1 for further details). Therefore, due to the presence of these underlying psychological factors, it should be assumed that manipulation of the faculty choice of a large number of prospective or current students would not necessarily positively influence their behaviour in order to produce a sharp reduction in UCT-SHS-MHS attendances by Arts, Music and Social Science and Humanities faculty students. Consequently faculty, which represents a deceptively complex variable, should be considered to constitute a variable marker.

Therefore, the following variables are no longer statistically significant in the multivariate analysis (the residence (home address) subcategory of students resident in African and non-African countries outside South Africa was not employed in the model):

- the race/population group subcategories of African and Coloured students
  [according to the classification appearing in section 4.3.1 these are "immutable factors" while the risk factor status proposed by Kraemer et al. (1997) label these variable subcategories as fixed markers]
  - These non-abridged format subcategories of the demographic variable of race/population group constitute two of the three components (along with Indian students) of the abridged format subcategory of Black students which is possibly related to several of the other eight (excluding the combined race/population group and gender-specific variable) variables employed in this study. Therefore details concerning Black students should be applicable to both these non-abridged format subcategories (refer above to the initial commentary concerning Table 5.190 for further details).

- the residence (home address) subcategory of students resident outside metropolitan Cape Town and outside the WCHR but within South Africa

  [according to the classification appearing in section 4.3.3 this is a "relatively immutable factor" while the risk factor status proposed by Kraemer et al. (1997) label this variable subcategory as either a variable marker or a causal risk factor depending on whether manipulation of this factor changes the outcome of UCT-SHS-MHS attendance]

  – This subcategory of the residence (home address) variable is difficult to relate to the other variables. However, it is conceivable that a series of underlying relationships do exist between this variable subcategory and the remaining eight (excluding the combined race/population group and gender-specific variable) variables employed in this study.

Also applicable here is the attempt, appearing above, to clarify the risk factor status of students residing outside metropolitan Cape Town (the above abridged format subcategory of the residence (home address)-specific variable constitutes one of the three components – along with students resident outside metropolitan Cape Town but within the WCHR and students resident in African and non-African countries outside South Africa – of this highly abridged format subcategory) that could be classified as either a variable marker or a causal risk factor.

Gillmore et al. (1992), quoted by Flisher (1996), propose the following as possible explanations for significant results in the bivariate analysis not being preserved in the multivariate models: (i) the relationships between two variable subcategories may be caused by another selected variable or determinant; (ii) two variable subcategories that are significantly related in the bivariate analysis may be related by means of one of the selected variables as an intervening variable, or (iii) some of the significant bivariate relationships would no longer be significant when the other variables are controlled (as occurs in multivariate logistic regression analysis) since they are all manifestations of the same phenomenon. The relationships that are preserved are not merely substitutes for each other as manifestations of correlates for UCT-SHS-MHS attendance.

(b) Objective 3 (patients versus the total student community)

In addressing Objective 3, it was shown that selected demographic, academic, residential (home address) and financial assistance variables relating to students are associated with usage of the local college/university mental health service at the University of Cape Town. This conclusion was based upon the presence of significant bivariate relationships between UCT-SHS-MHS attendance and UCT-SHS-MHS non-attendance for the following variables:

- gender (female students).
- the major race/population group subcategories of African students and White students (NEGATIVE relationship).
- age (students less than 25 years of age).
- language (non-English first language speaking students).
- faculty (Arts, Music and Social Science and Humanities faculty students).
- level of study (undergraduate students).
- year of study (first year (freshman/fresher) students).

- the major residence (home address) subcategories of students resident in metropolitan Cape Town (NEGATIVE relationship), students resident outside metropolitan Cape Town but within the WCHR (NEGATIVE relationship) and students resident outside metropolitan Cape Town and outside the WCHR but within South Africa.
- financial assistance (students receiving UCT-administered financial aid).

As in the case of Objective 2 above, although these bivariate relationships are sufficient to justify this conclusion, they do not take into account the influence of other variables on the relationship between selected abridged/highly abridged subcategories. The commentary raised by Flisher (1996) concerning the necessity of adopting the multivariate approach is also relevant here.

Table 5.191 demonstrates that, in the logistic regression analysis, the following variables record a statistically significant ($p<0,05$) association with UCT-SHS-MHS attendance versus registration at the University of Cape Town without UCT-SHS-MHS attendance:

- gender (female students)
  [according to the classification appearing in section 4.3.1 this is an "immutable factor" while the risk factor status proposed by Kraemer et al. (1997) label this variable as a fixed marker]
  – Refer to Objective 2 (patients versus controls) for further details of this subcategory of the demographic variable of gender.
- faculty (Arts, Music and Social Science and Humanities faculty students)
  [according to the classification appearing in section 4.3.2 this is a "mutable factor" while the risk factor status proposed by Kraemer et al. (1997) label this variable as either a variable marker or a causal risk factor depending on whether manipulation of this factor changes the outcome of UCT-SHS-MHS attendance]
  – Refer to Objective 2 (patients versus controls) for further details of this subcategory of the academic variable of faculty.
- level of study (undergraduate students)
  [as for faculty]
  – This subcategory of the academic variable of level of study is possibly related to other variables employed in this study such as age (undergraduate students are generally younger than their postgraduate peers), race/population group (at the time of this study, which coincided with the early stages of the transformation process currently affecting the University, there were, relative to undergraduate students, comparatively few Black postgraduate students), faculty (one faculty grouping may have a higher undergraduate to postgraduate student ratio than the other) and financial assistance status (the majority of recipients of UCT-administered financial aid are historically disadvantaged undergraduate Black students).
- year of study (first year (freshman/fresher) students)
  [as for faculty]
  – This subcategory of the academic variable of year of study is possibly related to other variables such as race/population group (as many Black students, due to the educational inequalities existing in South Africa's education system, are educationally underprepared for the often exacting academic demands of a tertiary education, it is feasible that a disproportionate number of these students are excluded from the University at the end of their first year on academic grounds), age (many Black students, due to financial constraints, are forced to defer the commencement of their tertiary education until they have managed to accumulate sufficient funds to permit them to register at the University), language (as the majority of Black students attending the University are forced to study in their second, or even third, language, they are further academically disadvantaged with the result that they are even more likely to be excluded from the University on academic grounds at the end of their first year), faculty (it

is possible that one faculty grouping may have a higher first year student intake with a correspondingly higher exclusion rate at the end of the first year than the other – it is a known fact that, in the past, Arts faculty adopted such a strategy) and financial assistance (the majority of recipients of UCT-administered financial aid are historically disadvantaged Black students who are subject to the educational and language-specific disadvantages outlined above).

- the residence (home address) subcategory of students who reside within metropolitan Cape Town
  [according to the classification appearing in section 4.3.3 this is a "relatively immutable factor" while the risk factor status proposed by Kraemer et al. (1997) label this variable as either a variable marker or a causal risk factor depending on whether manipulation of this factor changes the outcome of UCT-SHS-MHS attendance]
  – As mentioned above in Objective 2, this non-abridged format subcategory of the residence (home address) variable is difficult to relate to the other variables. However, it is conceivable that a series of underlying relationships do exist between this variable subcategory and the remaining eight (excluding the combined race/population group and gender-specific variable) variables employed in this study.
- the financial assistance variable (students receiving UCT-administered financial aid)
  [according to the classification appearing in section 4.3.4 this is a "relatively immutable factor" while the risk factor status proposed by Kraemer et al. (1997) label this variable as either a variable marker or a causal risk factor depending on whether manipulation of this factor changes the outcome of UCT-SHS-MHS attendance]
  – This subcategory of the financial assistance variable is closely related to race/population group insofar as the majority of recipients of UCT-administered financial aid are historically disadvantaged Black students. (Refer to Objective 2 (patients versus controls) for further details of the relationship of this subcategory of the demographic variable of race/population group to the other variables – including age, language, faculty, level of study and year of study – employed in this study).

This paragraph attempts to clarify the risk factor status of variables that could be classified as either a variable marker or a causal risk factor. The Literature Review has previously highlighted the level of skills acquisition (the transition from novice to skilled professional, scholar or performer) to which the undergraduate student is subject (refer to section 3.3.4.2 for further details). This is a demanding process which can often lead to potentially serious adjustment problems. However, the student is required to develop a wide variety of academic, technical and social skills to be able to successfully complete the diploma/degree designed to enable him/her to be suitably qualified to meet the often exacting demands of a designated career and role in society. Therefore, as this variable is somewhat difficult to manipulate, level of study would not appear to strongly fulfil the role of a causal risk factor. However, relevant University authorities (especially the Academic Development Programme – UCT-ADP) may be able to ameliorate this process for historically disadvantaged students who are educationally underprepared (also refer to comments raised in Objective 2 for the variable of language) insofar as remedial steps taken to improve academic functioning (and linguistic competence) amongst these students should result in improved academic performance which should lead to a reduction in academic-related stress which, in turn, could result in fewer mental disorders requiring evaluation and/or therapeutic intervention at the UCT-SHS-MHS. Likewise, issues confronting first year students (freshmen/freshers) have also been raised (e.g. the "freshman myth" (Stern, 1966 and 1970) or "matriculation myth" (Baker, McNeil and Siryk, 1985) which refers to the fact that, on the average, entering freshmen/freshers have expectations concerning college or university that are more positively toned that the actual experience of being in college or university). The new found social freedom combined with increased academic responsibility can often serve to create a sense of confusion and self-doubt within the

impressionable first year student. This might predispose these students to adjustment and/or anxiety disorders. However, as in the case of undergraduate students above, the first year student (freshman/fresher) is obliged to meet certain, often exacting, academic requirements. Therefore, as this variable is also somewhat difficult to manipulate, year of study would not appear to strongly fulfil the role of a causal risk factor. However, relevant University authorities should again be able to implement suitable programmes to assist vulnerable students to meet these requirements with, where possible, a minimal degree of stress. As above, remedial steps taken to improve academic functioning (and linguistic competence) amongst these students should result in improved academic performance which should lead to a reduction in academic-related stress which, in turn, could result in fewer mental disorders requiring evaluation and/or therapeutic intervention at the UCT-SHS-MHS. On the other hand, students receiving UCT-administered financial aid are clearly subject to a number of social and financial concerns associated with the pursuit of a tertiary education (e.g. Agar (1989) – anxiety about bursary money only becoming available well into the first term, Hawarden (1985 and 1992) – not being able to meet their own requirements for text books, stationery and clothes, and Selikow (1994) – concern about their families living in poor conditions – refer to section 3.3.6 for further details). Therefore financial assistance would appear to strongly fulfil the role of a causal risk factor insofar as remedial steps taken to reduce financial concerns amongst socio-economically deprived students should result in substantially diminished levels of anxiety and, possibly, improved academic performance which, in turn, could result in fewer mental disorders requiring evaluation and/or therapeutic intervention at the UCT-SHS-MHS.

(The variables of language, faculty and the residence (home address) subcategory of students resident within metropolitan Cape Town have not been discussed here as they have already been raised in Objective 2.)

Therefore, the following variables are no longer statistically significant in the multivariate analysis (the residence (home address) subcategory of students resident in African and non-African countries outside South Africa was not employed in the model):

- the race/population group subcategories of African and Coloured students
  [according to the classification appearing in section 4.3.1 these are "immutable factors" while the risk factor status proposed by Kraemer et al. (1997) label these variable subcategories as fixed markers]
  - Refer above to the initial commentary following Table 5.190 relating to Objective 2 (patients versus controls) for further details of these subcategories of the demographic variable of race/population group.
- age (students less than 25 years of age)
  [according to the classification appearing in section 4.3.1 this is an "immutable factor" while the risk factor status proposed by Kraemer et al. (1997) label this variable subcategory as a fixed marker]
  - This subcategory of the demographic variable of age is possibly related to other variables such as race/population group (many Black students, due to financial constraints, are forced to defer the commencement of their tertiary education until they have managed to accumulate sufficient funds to permit them to register at the University), language (virtually all the non-English first language speaking students (with the exception of a few non-African international students) are Black students), level of study (undergraduate students are generally younger than their postgraduate peers) and financial assistance (the majority of recipients of UCT-administered financial aid are historically disadvantaged Black students).

- language (non-English first language speaking students)
  [according to the classification appearing in section 4.3.1 this is a "relatively immutable factor" while the risk factor status proposed by Kraemer et al. (1997) label this variable subcategory as either a variable marker or a causal risk factor depending on whether manipulation of this factor changes the outcome of UCT-SHS-MHS attendance]
  – Refer above to the initial commentary following Table 5.190 relating to Objective 2 (patients versus controls) for further details of this subcategory of the demographic variable of language.
- the residence (home address) subcategories of students resident outside metropolitan Cape Town but within the WCHR and students resident outside metropolitan Cape Town and outside the WCHR but within South Africa
  [according to the classification appearing in section 4.3.3 these are "relatively immutable factors" while the risk factor status proposed by Kraemer et al. (1997) label these variable subcategories as either variable markers or causal risk factors depending on whether manipulation of these factors change the outcome of UCT-SHS-MHS attendance]
  – These abridged format subcategories of the residence (home address) variable are difficult to relate to the other variables. However, it is conceivable that a series of underlying relationships do exist between these variable subcategories and the remaining eight (excluding the combined race/population group and gender-specific variable) variables employed in this study.

Also applicable here is the attempt, appearing above in Objective 2, to clarify the risk factor status of language and students residing outside metropolitan Cape Town (the above two abridged format subcategories of the residence (home address)-specific variable constitute two of the three components – along with students resident in African and non-African countries outside South Africa – of this highly abridged format subcategory) that could be classified as either a variable marker or a causal risk factor as well as the possible explanations, also appearing in Objective 2 above, for significant results in the bivariate analysis not being preserved in the multivariate models forwarded by Gillmore et al. (1992) are also applicable here.

6.2.7.2 Clinical/diagnostic-specific data

This subheading consists of the selection of the most important findings (labelled here as "Specific findings") initially reported in section 5.2.1 from the logistic models documented in the clinical/diagnostic-specific results detailed in Appendix VIIIa (major diagnostic categories) and Appendix VIIIb (individual V-codes). These findings are classified according to the individual demographic, academic, residential (home address) and financial assistance variables that record an altered level of statistical significance (either newly statistically significant or no longer statistically significant) to that reported for the patient-specific data (refer to section 5.2.1). (It is important to note that the inclusion of these "Specific findings" in section 5.2.2 is subject to a series of conventions detailed in this subsection.)

(a) Affective disorder

(i) Objective 2 (patients versus controls)

Specific finding #1

The relationships between all the selected variables and presentation at the UCT-SHS-MHS are maintained.

(ii) Objective 3 (patients versus the total student community)

Specific finding #2

The relationships between all the selected variables and presentation at the UCT-SHS-MHS are maintained.

The Objective 2 and Objective 3-specific findings are important insofar as they demonstrate that the characteristics of students presenting at the UCT-SHS-MHS with affective disorder correspond to those of all students attending this service-orientated facility. Therefore it is possible that all students using the UCT-SHS-MHS are potentially at risk of developing affective disorder.

(Also refer to section 6.2.12(b) for a discussion of the UCT-SHS-MHS-specific results for overall student attendees diagnosed by resident therapists as presenting with affective disorders.)

(b) Adjustment disorder

(i) Objective 2 (patients versus controls)

Specific finding #3

The relationship between language (English first language speaking students) and presentation at the UCT-SHS-MHS is no longer statistically significant.

(ii) Objective 3 (patients versus the total student community)

Specific finding #4

The relationships between level of study (undergraduate students) and students resident in metropolitan Cape Town and presentation at the UCT-SHS-MHS are no longer statistically significant.

The Objective 2-specific finding, by rejecting Research Hypothesis IVa of the UCT-SHS study, suggests that, in the logistic regression analysis, the possible explanations forwarded in section 6.2.2.5(b) as to why

non-English first language speaking students were NOT significantly more likely than English first language speaking students to use the mental health service in preference to the medical service are applicable to adjustment disorders presenting at the UCT-SHS-MHS. The possible interrelationships between English first language speaking students and the other variables employed in this study (refer above to section 6.2.7.1 for further details) suggest that this subcategory of the demographic variable of language is difficult to relate to the other variables, although the corresponding subcategory of non-English first language speaking students is closely related to Black students who, in turn, are related to financial assistance and, possibly, age, faculty, level of study and year of study. Therefore, any alteration of one or more of these potentially intervening variables in students documented as presenting at the UCT-SHS-MHS with adjustment disorder could have given rise to this Specific finding.

On the other hand, the Objective 3-specific finding, by rejecting Research Hypothesis VIa and now Research Hypothesis VIIIa of the UCT-SHS study, suggests that, in the logistic regression analysis, most of the observations made in section 6.2.3.2(c) and section 6.2.4.3 concerning possible reasons for increased undergraduate (as opposed to postgraduate) student usage of the mental health service and increased utilisation of the UCT-SHS-MHS by students whose home address is outside (rather than within) metropolitan Cape Town, respectively, no longer apply to adjustment disorders. The possible interrelationships between undergraduate students and the other variables employed in this study (refer above to section 6.2.7.2 for further details) suggest that this subcategory of the academic variable of level of study is possibly related to age, race/population group, faculty and financial assistance status. On the other hand, this abridged format subcategory of the residence (home address) variable is difficult to relate to the other variables although it is conceivable that a series of underlying relationships do exist between this subcategory and the other variables employed in this study. Therefore, any alteration of one or more of these potentially intervening variables in students documented as presenting at the UCT-SHS-MHS with adjustment disorder could have given rise to this Specific finding.

(Also refer to section 6.2.1.2(c) for a discussion of the UCT-SHS-MHS-specific results for overall student attendees diagnosed by resident therapists as presenting with adjustment disorders.)

(c) V-codes

(i) Objective 2 (patients versus controls)

Specific finding #5

The relationships between language (English first language speaking students) and faculty (Arts, Music and Social Science and Humanities faculty students) and presentation at the UCT-SHS-MHS are no longer statistically significant.

(ii) Objective 3 (patients versus the total student community)

Specific finding #6

The relationships between level of study (undergraduate students), year of study (first year (freshman/ fresher) students) and students resident in metropolitan Cape Town and presentation at the UCT-SHS-MHS are no longer statistically significant.

The Objective 2-specific finding, by rejecting Research Hypothesis IVa and Research Hypothesis Va of the UCT-SHS study, suggests that, in the logistic regression analysis, the possible explanations forwarded in section 6.2.2.5(b) and section 6.2.3.1(b) as to why non-English first language speaking students were NOT significantly more likely than English first language speaking students to use the mental health service in preference to the medical service and why Arts, Music and Social Science and Humanities faculty students were significantly more likely than non-Arts, Music and Social Science and Humanities faculty students to utilise the UCT-SHS-MHS rather than the UCT-SHS, respectively, are no longer applicable to V-codes presenting at the UCT-SHS-MHS. The possible interrelationships between English first language speaking students and the other variables employed in this study are outlined above, in Specific finding #3 and will, consequently, not be further discussed here. Likewise, the possible interrelationships between Arts, Music and Social Science and Humanities faculty students and the other variables employed in this study (refer above to section 6.2.7.1 for further details) suggest that this subcategory of the academic variable of faculty is possibly related to gender, race/population group, level of study and year of study. Therefore, any alteration of one or more of these potentially intervening variables in students documented as presenting at the UCT-SHS-MHS with V-codes could have given rise to this Specific finding.

On the other hand, the Objective 3-specific finding, by rejecting Research Hypothesis VIa, Research Hypothesis VIIa and now Research Hypothesis VIIIa of the UCT-SHS study, suggests that, in the logistic regression analysis, most of the observations made in section 6.2.3.2(c), section 6.2.3.3(c) and section 6.2.4.3 concerning possible reasons for increased undergraduate (as opposed to postgraduate) student and first year (freshman/fresher) (as opposed to 02 to 06 year) student usage of the mental health service as well as increased utilisation of the UCT-SHS-MHS by students whose home address is outside (rather than within) metropolitan Cape Town, respectively, no longer apply to V-codes. The possible interrelationships between undergraduate students and the other variables employed in this study (refer above to section 6.2.7.2 for further details) suggest that this subcategory of the academic variable of level of study is possibly related to age, race/population group, faculty and financial assistance status. Likewise, the possible interrelationships between first year (freshman/fresher) students and the other variables employed in this study (refer above to section 6.2.7.2 for further details) suggest that this subcategory of the academic variable of year of study is possibly related to race/population group, age, language, faculty and financial assistance. On the other hand, this abridged format subcategory of the residence (home address) variable is difficult to relate to the other variables although it is conceivable that a series of underlying relationships do exist between this subcategory and the other variables employed in this study. Therefore, any alteration of one or more of these potentially

intervening variables in students documented as presenting at the UCT-SHS-MHS with V-codes could have given rise to this Specific finding.

(Also refer to section 6.2.1.2(d) for a discussion of the UCT-SHS-MHS-specific results for overall student attendees diagnosed by resident therapists as presenting with V-codes.)

(d) Anxiety (neurotic) disorder

(i) Objective 2 (patients versus controls)

Specific finding #7

The relationships between gender (female students) and language (English first language speaking students) and presentation at the UCT-SHS-MHS are no longer statistically significant while, on the other hand, the relationship between White students and presentation at the UCT-SHS-MHS is now statistically significant.

(ii) Objective 3 (patients versus the total student community)

Specific finding #8

The relationship between students resident in metropolitan Cape Town and presentation at the UCT-SHS-MHS is no longer statistically significant while, on the other hand, the relationships between Coloured students and White students and presentation at the UCT-SHS-MHS are now statistically significant.

The Objective 2-specific finding, by rejecting Research Hypothesis Ia and Research Hypothesis IVa of the UCT-SHS study, suggests that, in the logistic regression analysis, most of the possible explanations forwarded in section 6.2.2.1(b) and section 6.2.2.5(b) as to why female students were significantly more likely than male students to use the mental health service in preference to the medical service and why non-English first language speaking students were NOT significantly more likely than English first language speaking students to utilise the UCT-SHS-MHS rather than the UCT-SHS, respectively, are applicable to anxiety (neurotic) disorders presenting at the UCT-SHS-MHS. The additionally significant race/population group subcategory of White students also rejects Research Hypothesis IIa of the UCT-SHS study. The possible interrelationships between female students and the other variables employed in this study (refer above to section 6.2.7.1 for further details) suggest that this subcategory of the demographic variable of gender is possibly related to race/population group, language, faculty and level of study. Likewise, the possible interrelationships between English first language speaking students and the other variables employed in this study are outlined, above, in Specific finding #3 and will, consequently, not be further discussed here. Furthermore, the possible interrelationships between this non-abridged format subcategory of the demographic variable of race/population group are difficult to relate to the other variables, although the corresponding abridged format subcategory of Black (African, Coloured and Indian) students is related to

many of them (refer above to Specific finding #3 for further details). Therefore, any alteration of one or more of these potentially intervening variables in students documented as presenting at the UCT-SHS-MHS with anxiety (neurotic) disorder could have given rise to this Specific finding.

On the other hand, the Objective 3-specific finding, by now rejecting Research Hypothesis VIIIa of the UCT-SHS study suggests that, in the logistic regression analysis, most of the observations made in section 6.2.4.3 concerning possible reasons for increased usage of the mental health service by students whose home address is outside (rather than within) metropolitan Cape Town do not apply to anxiety (neurotic) disorders. The additionally significant race/population group subcategory of Coloured students (who along with African and Indian students constitute Black students) is compatible with Research Hypothesis IIa of the UCT-SHS study while, conversely, the subcategory of White students rejects Research Hypothesis IIa of the UCT-SHS study. This abridged format subcategory of the residence (home address) variable is difficult to relate to the other variables although it is conceivable that a series of underlying relationships do exist between this subcategory and the other variables employed in this study. Likewise, the possible interrelationships between White students are difficult to relate to the other variables, although the corresponding abridged format subcategory of Black (African, Coloured and Indian) students is related to many of them (refer above to Specific finding #3 for further details). Therefore, any alteration of one or more of these potentially intervening variables in students documented as presenting at the UCT-SHS-MHS with anxiety (neurotic) disorder could have given rise to this Specific finding.

(Also refer to section 6.2.1.2(e) for a discussion of the UCT-SHS-MHS-specific results for overall student attendees diagnosed by resident therapists as presenting with anxiety (neurotic) disorders.)

(e) Relationship problem

(i) Objective 2 (patients versus controls)

Specific finding #9

The relationship between language (English first language speaking students) and presentation at the UCT-SHS-MHS is no longer statistically significant.

(ii) Objective 3 (patients versus the total student community)

Specific finding #10

The relationships between level of study (undergraduate students), year of study (first year (freshman/ fresher) students) and students resident in metropolitan Cape Town and presentation at the UCT-SHS-MHS are no longer statistically significant.

The Objective 2-specific finding, by rejecting Research Hypothesis IVa of the UCT-SHS study, suggests that, in the logistic regression analysis, most of the possible explanations forwarded in section 6.2.2.5(b) as to why non-English first language speaking students were NOT significantly more likely than English first language speaking students to use the mental health service in preference to the medical service are applicable to relationship problems presenting at the UCT-SHS-MHS. (The same exception for Objective 2 is also recorded for the major diagnostic category of adjustment disorder. Therefore, it is possible that all students with adjustment disorder using the UCT-SHS-MHS are potentially at risk of developing relationship problems.) The possible interrelationships between English first language speaking students and the other variables employed in this study are outlined, above, in Specific finding #3 and will, consequently, not be further discussed here. Therefore, any alteration of one or more of these potentially intervening variables in students documented as presenting at the UCT-SHS-MHS with relationship problem could have given rise to this Specific finding.

On the other hand, the Objective 3-specific finding, by rejecting Research Hypothesis VIa, Research Hypothesis VIIa and now Research Hypothesis VIIIa of the UCT-SHS study, suggests that, in the logistic regression analysis, most of the observations made in section 6.2.3.2(c), section 6.2.3.3(c) and section 6.2.4.3 concerning possible reasons for increased undergraduate (as opposed to postgraduate) student and first year (freshman/fresher) (as opposed to 02 to 06 year) student usage of the mental health service as well as increased utilisation of the UCT-SHS-MHS by students whose home address is outside (rather than within) metropolitan Cape Town, respectively, no longer apply to relationship problems. (The same exceptions for Objective 3 are also recorded for the major diagnostic category of V-codes. As in the case of affective disorder mirroring overall student attendees, this finding is important insofar as it demonstrates that the characteristics of students presenting at the UCT-SHS-MHS with relationship problem correspond to those of students attending this service-orientated facility with all the individual V-codes. Therefore, it is possible that all students with V-codes using the UCT-SHS-MHS are potentially at risk of developing relationship problems.) The possible interrelationships between undergraduate students, first year (freshman/fresher) students and students resident in metropolitan Cape Town, respectively, and the other variables employed in this study are all outlined, above, in Specific finding #6 and will, consequently, not be further discussed here. Therefore, any alteration of one or more of these potentially intervening variables in students documented as presenting at the UCT-SHS-MHS with relationship problem could have given rise to this Specific finding.

(Also refer to section 6.2.1.2(d) for a discussion of the UCT-SHS-MHS-specific results for overall student attendees diagnosed by resident therapists as presenting with relationship problems.)

(f) Family problem

(i) Objective 2 (patients versus controls)

Specific finding #11

The relationships between language (English first language speaking students) and faculty (Arts, Music and Social Science and Humanities faculty students) and presentation at the UCT-SHS-MHS are no longer statistically significant.

(ii) Objective 3 (patients versus the total student community)

Specific finding #12

The relationships between faculty (Arts, Music and Social Science and Humanities faculty students), level of study (undergraduate students) and students resident in metropolitan Cape Town and presentation at the UCT-SHS-MHS are no longer statistically significant.

The Objective 2-specific finding, by rejecting Research Hypothesis IVa and Research Hypothesis Va of the UCT-SHS study, suggests that, in the logistic regression analysis, the possible explanations forwarded in section 6.2.2.5(b) and section 6.2.3.1(b) as to why non-English first language speaking students were NOT significantly more likely than English first language speaking students to use the mental health service in preference to the medical service and why Arts, Music and Social Science and Humanities faculty students were significantly more likely than non-Arts, Music and Social Science and Humanities faculty students to utilise the UCT-SHS-MHS rather than the UCT-SHS, respectively, are no longer applicable to family problems presenting at the UCT-SHS-MHS. (The same exceptions for Objective 2 are also recorded for the major diagnostic category of V-codes. As in the case of affective disorder mirroring overall student attendees, this finding is important insofar as it demonstrates that the characteristics of students presenting at the UCT-SHS-MHS with family problem correspond to those of students attending this service-orientated facility with all the individual V-codes. Therefore, it is possible that all students with V-codes using the UCT-SHS-MHS are potentially at risk of developing family problems.) The possible interrelationships between English first language speaking students and Arts, Music and Social Science and Humanities faculty students, respectively, and the other variables employed in this study are both outlined, above, in Specific finding #5 and will, consequently, not be further discussed here. Therefore, any alteration of one or more of these potentially intervening variables in students documented as presenting at the UCT-SHS-MHS with family problem could have given rise to this Specific finding.

On the other hand, the Objective 3-specific finding, by rejecting Research Hypothesis Va, Research Hypothesis VIa and now Research Hypothesis VIIIa of the UCT-SHS study, suggests that, in the logistic regression analysis, most of the observations made in section 6.2.3.1(c), section 6.2.3.2(c) and section 6.2.4.3

concerning possible reasons for increased Arts, Music and Social Science and Humanities faculty (as opposed to non-Arts, Music and Social Science and Humanities faculty) student and undergraduate (as opposed to postgraduate) student usage of the mental health service as well as increased utilisation of the UCT-SHS-MHS by students whose home address is outside (rather than within) metropolitan Cape Town, respectively, no longer apply to family problems presenting at the UCT-SHS-MHS. The possible interrelationships between Arts, Music and Social Science and Humanities faculty students, undergraduate students and students resident in metropolitan Cape Town, respectively, and the other variables employed in this study are all outlined, above, in Specific findings #4 and #5 and will, consequently, not be further discussed here. Therefore, any alteration of one or more of these potentially intervening variables in students documented as presenting at the UCT-SHS-MHS with family problem could have given rise to this Specific finding.

(Also refer to section 6.2.1.2(d) for a discussion of the UCT-SHS-MHS-specific results for overall student attendees diagnosed by resident therapists as presenting with family problems.)

6.2.8 Concluding Comments

Bhugra (1993) notes that culture may predispose, precipitate or perpetuate mental disorders by: (i) creating basic vulnerable personality types; (ii) stressful roles; (iii) pathological family interactions; (iv) acculturation, and (v) fostering sanctions against certain behaviours and rewarding certain maladjusted behaviours. Furthermore, in making a clinical diagnosis of mental illness in a patient from a different culture, the author suggests that the clinician (or therapist) must bear in mind the following points: (i) whether the specific cluster of symptoms and signs as well as behavioural changes demonstrated by the patient are interpreted by them and by their community as evidence of a "culture-bound psychological disorder"; (ii) the extent to which cultural factors affect some of the diagnostic categories and techniques of western psychiatry; (iii) the role of the patient's culture in helping them to communicate and understand their own psychological distress; (iv) the perception of the patient's abnormal behaviour and complaints by the patient's personal, family and social networks; (v) whether the patient's experience can be understood in terms of social, economic and political pressures on them, and (vi) the experiences of patients in a different culture may not only affect their presentation but also their symptomatology.

Kleinman and Lin (1980), quoted by Bhugra (1993), proposes that the nature of psychological reactions relate to the interaction between biological, psychological and social domains to produce the following categories of mental disorders: (i) anxiety (neurotic) disorder is a result of the interaction between psychological and social domains; (ii) personality/character disorder is a result of the interaction between biological and social domains; (iii) psychosomatic/psychophysiological disorder is a result of the interaction between biological and psychological domains, and (iv) psychotic (schizophrenic) disorder is a result of the interaction between biological, psychological and social domains.

6.3 UTILITY

In order to adequately understand the role of the UCT-SHS-MHS, it is necessary to appreciate where it fits into the structure and functioning of the whole health system as represented by the University of Cape Town. The knowledge required to achieve this would include, inter alia, information on the organisational structure and culture, the skill and experience of staff (at the UCT-SHS-MHS and elsewhere) and the relationship between the various departments (Katzenellenbogen, 1987). Therefore, an outline of student service-orientated departments (including the UCT Student Development and Services Department, the UCT Student Advice and Development Centre, the UCT Undergraduate Financial Aid Office, the UCT Student Housing Office and the UCT Academic Development Programme) relevant to the UCT-SHS study appears in Appendix IX. This material, by providing background information relating to the structure and function of some of the potential beneficiaries of the study, helps to contextualise the range of potential benefits outlined below.

This section consists of two subsections. The first subsection describes a conceptual framework which details specific utilisation-orientated criteria (modified from Power, 1991) that are related to both the successful design of a public health research project and the effective implementation of recommendations derived from the results of such projects. This framework will be employed to illustrate how the various specific criteria that need to be considered at each design level of a public health research project have – allowing for the constraints and limitations of the retrospective case-control (Objective 2)/cross-sectional (Objective 3) methodology employed – been incorporated into this study. The second subsection, after a brief overview of the scientific discipline of epidemiology, outlines the range of potential benefits to be derived by, inter alia, student service-orientated facilities, administrative departments and student organisations from results obtained from the UCT-SHS study. Potential beneficiaries of this research would include the Central Administration, the UCT-SDSD (Student Development and Services Department) and its individual sections such as the UCT-SHS itself, the UCT-SADC (Student Advice and Development Centre) and the UCT-UFAO (Undergraduate Financial Aid Office), the UCT-SHO (Student Housing Office) including residences, the various academic departments including the UCT-ADP (Academic Development Department) and other equity promoting bodies such as the Equal Opportunities Office and the African Gender Institute (formerly known as the Equal Opportunities Research Project – EORP).

It must be noted that a major goal of this study has been to produce scientifically valid data that can be readily utilised by relevant University authorities to improve the quality of life of all students – especially historically disadvantaged and educationally underprepared Black students – attending the University of Cape Town. It is hoped that various problem areas highlighted by these results might be addressed by these authorities to assist such students to cope better with the often exacting demands of University life.

6.3.1 Utilisation-orientated Criteria for Public Health Research

This model of four levels and fifteen utilisation-orientated criteria for the successful design and successful implementation of recommendations of public health research projects formulated by Power (1991) was presented at the Health Informatics for Southern Africa (HISA) 91 conference. This framework (with minor modifications) will be employed in this subsection to illustrate not only their relevance to the UCT-SHS study but also how this study has endeavoured to fulfil each one of them (refer to Table 6.11).

Table 6.11 Utilisation-orientated criteria for the successful design and implementation of recommendations of public health research projects (modified from Power, 1991).

Design level	Utilisation-orientated criteria
1. The study	(a) Must fall within the strategy, mission and goal of the organisation. (b) Must be scientifically designed. (c) Must survey a representative sample. (d) Must be designed to inform.
2. The data	(a) Must answer a relevant question. (b) Must be clearly defined (each item thereof). (c) Must be correctly interpreted. (d) Must be correctly applied.
3. The results	(a) Must influence management. (b) Must develop indicators and trends. (c) Must highlight predisposing factors. (d) Must highlight enabling factors.
4. Applications	(a) Strategic Management. (b) Tactical Management. (c) Operational Management.

6.3.1.1 Study design level

(a) The study must fall within the strategy, mission and goal of the organisation

The UCT-SHS study certainly falls within the strategy, mission and goal of the University of Cape Town insofar as the University's rationale is to promote the principles of equal opportunity and the full development of the human potential of its students – especially the potential of historically disadvantaged Black students who would be likely to suffer from, inter alia, adjustment-related disorders to University life requiring psychological or psychiatric, evaluation and/or therapeutic intervention at the UCT-SHS-MHS. These principles appear in the University of Cape Town Mission Statement which was "adopted and affirmed" on 24 April 1996 after widespread consultation involving all sections of the UCT community. This Mission Statement claims to place UCT firmly in the African and South African context – this is certainly compatible with the focus of this study.

(b) The study must be scientifically designed

The UCT-SHS study is designed in accordance to standard descriptive and analytic epidemiological principles as a retrospective case-control study (Objective 2) and a cross-sectional study (Objective 3) which endeavours to make optimal usage of various University records in order to achieve its stated aims and objectives. Computerised data analysis employing appropriate statistical techniques is utilised to obtain scientifically valid results from these records that will either confirm or reject a series of stated research hypotheses including whether historically disadvantaged Black students are more predisposed to certain mental disorders presenting as psychological or psychiatric complaints at the UCT-SHS-MHS than their generally historically advantaged White peers.

(c) The study must survey a representative sample

The UCT-SHS study attempts to survey a representative sample insofar as all attendees of the UCT-SHS-MHS (incorporating psychologist, psychiatrist and psychologically or psychiatrically orientated medical officer consultations) are included during the study period of 1 January 1991 to 31 December 1993. The major potential limitation of this study is that it does not (and cannot) include those students who were seen outside of the UCT-SHS-MHS for evaluation and/or therapeutic intervention. Despite this limitation, the UCT-SHS-MHS patient profile should be representative of the historically disadvantaged Black student suffering from, inter alia, various adjustment-related problems to University life who, due to financial constraints, would be highly unlikely to consult with a private mental health care professional. In the light of the transformation process currently affecting the University of Cape Town, this subset of students constitutes a special interest group in this study.

(d) The study must be designed to inform

The UCT-SHS study is designed to inform University authorities of detailed utilisation patterns of the UCT-SHS-MHS. Any statistically significant finding indicating any demographic, academic, residential (home address) or financial assistance variable subcategory that predisposes students to certain mental disorders presenting as psychological or psychiatric complaints at the UCT-SHS-MHS will alert relevant authorities to risk factors that need to be addressed. This information, complemented by appropriate remedial actions to prevent or correct any problem areas, should assist students to derive maximum benefit from their University careers.

6.3.1.2 Data design level

(a) The data must answer a relevant question

The UCT-SHS study attempts to answer a question (by addressing an issue) that is extremely relevant to the transformation process currently affecting the University. As one of the goals of the transformation process

is to improve access to the University for historically disadvantaged Black students, it is important to assess whether those students from a similar background currently studying at UCT are inclined to certain psychological or psychiatric disorders presenting at the UCT-SHS-MHS. The transformation process would be facilitated by any steps initiated to reverse adverse factors that might promote various adjustment-related disorders which adversely affect, inter alia, the academic careers of these students.

(b) The data must be clearly defined (each item thereof)

The UCT-SHS study consists of clearly defined demographic, academic, residential (home address) and financial assistance variables that are obtained from official University records as well as UCT-SHS derived clinical data. These variables permit detailed statistical analysis to provide, inter alia, race and gender-specific results that highlight student subsets at risk of developing certain psychological or psychiatric disorders. The ability to quantify these results will permit comparison of problem areas and resultant resource allocation to the most severe problem areas.

(c) The data must be correctly interpreted

The UCT-SHS study will endeavour not only to highlight statistically significant findings that will confirm (or reject) the previously stated research hypotheses – including the one concerning historically disadvantaged Black students – but also to interpret these results within clinical and University community-based realities. Therefore, a statistically significant result does not always automatically imply that a direct causal relationship exists between a variable under investigation and attendance at the UCT-SHS-MHS for psychological or psychiatric complaints. Careful interpretation of research results should facilitate appropriate application thereof (see below).

(d) The data must be correctly applied

The UCT-SHS study will endeavour to apply research results (including correctly interpreted statistically significant findings – see above) by, inter alia, drafting recommendations that are appropriate to circumstances currently prevailing at the University. Therefore, wherever possible, recommendations will be addressed to currently constituted University student service-orientated facilities – especially those linked to the UCT-SDSD (Student Development and Services Department) on how to improve their recognition of and service to students either potentially at risk of or affected by various mental health problems. The ultimate practical application of the results obtained from this study, however, is dependent on University authorities utilising findings relevant to their departments.

6.3.1.3 Result design level

(a) The results must influence management

The UCT-SHS study has the interest and support of several members of the University executive management (refer to copies of letters of endorsement included in Appendix I). Therefore, it is hoped that executive management will be positively influenced to distribute the findings of this study to the heads of student service-orientated facilities whose awareness of students potentially at risk of or suffering from various psychological or psychiatric complaints would be enhanced. This knowledge could, thereby, influence middle-management to institute various measures to improve their service to all students.

(b) The results must develop indicators and trends

The UCT-SHS study will develop results that can be employed as indicators and used to develop trends. The individual demographic, academic, residential (home address) and financial assistance variables are reproducible indicators that can be employed for any possible future follow-up study/ies conducted at the UCT-SHS-MHS to evaluate the effectiveness of any interventions that may be implemented. Thereby, it will be simple to develop longitudinal time trends to augment those obtained in this study.

(c) The results must highlight predisposing factors

The UCT-SHS study specifically aims to highlight factors that predispose students to psychological or psychiatric complaints requiring evaluation and/or therapeutic intervention at the UCT-SHS-MHS. The above demographic, academic, residential (home address) and financial assistance variables will be analysed according to appropriate statistical techniques to ascertain predisposing factors that are responsible for causing students to present at the UCT-SHS-MHS.

(d) The results must highlight enabling factors

The UCT-SHS study also aims to highlight factors that might enable University authorities to assist students to reduce the incidence and severity of psychological or psychiatric complaints affecting them. Once predisposing factors (see above) have been ascertained, appropriate remedial steps, where possible, can be undertaken to ameliorate problems that may be affecting various student groups. Any measures undertaken to improve the adaptation of, inter alia, historically disadvantaged Black students to the demands of University life would promote the successful (and timeous) completion of degree courses.

6.3.1.4 Application design level

(a) Strategic Management

(b) Tactical Management

(c) Operational Management

(Refer to section 6.3.2 below for further details.)

6.3.2 Range of Potential Benefits

> *The goal of epidemiology is to improve the health status of human populations ... A descriptive study is used to describe the impact of disease in a particular community, analytical studies are used to determine particular risk factors for the diseases described, interventions are applied by the local health authority to reduce the impact of the risk factors and subsequent disease on a community.*
>
> (Yach and Botha, 1987b: p. 633)

Consequently,

> *Once the magnitude and distribution of a health problem and its possible determinants (risk factors) have been established, attempts to prevent, treat, or control the problem by intervening on one or more of the determinants (risk factors) should be made.*
>
> (Botha and Yach, 1987: p. 657)

However,

> *The effectiveness of the intervention is evaluated at some point. If the intervention has been successful the health status of a community will improve over a certain period of time, this time period being a product of both the time it takes to implement the intervention as well as the time it takes to conduct the evaluation.*
>
> (Yach and Botha, 1987b: p. 633)

In describing the characteristics of students receiving mental health services at the University of Cape Town, the goal of this study is to meaningfully contribute to an improvement in the mental health status of the entire student body. This descriptive data will, within certain constraints and limitations (refer to section 6.1.2 for further details), describe the impact (although not the true prevalence) of mental illness on the student community. The accompanying analytical data employing selected demographic, academic, residential (home address) and financial assistance variables will determine particular subsets of students (proxy risk factors) that may be predisposed to present at the UCT-SHS-MHS with psychological or psychiatric complaints. Relevant University authorities from the student service-oriented facilities detailed below will be required to formulate and implement strategies directed, where possible, to reduce the prevalence of mental

disorders in student subsets who have been assessed to be at risk of developing these complaints. Results obtained from this study could also be employed as a baseline to gauge the effectiveness of any future interventive programmes that may be instituted by the University. In conclusion, epidemiology as a technique of analysis has been shown to be useful in developing a rational basis for optimal health service planning (Rip, 1984) – for the health care needs of the student community are a function of its overall health status.

Therefore, epidemiological findings described in this study would assist both relevant University authorities and students with the following functions:

- **Strategic and Tactical Management Planning** to provide the necessary background of retrospective data in the form of mental health status indicators for University of Cape Town central management (including the Student Development and Services Department: UCT-SDSD) to accurately assess, within methodological constraints and limitations, patient consultation patterns of the UCT-SHS-MHS.
- **Operational Management Planning** to enable the UCT-SHS to improve access to their medical services by enhancing recognition and, thereby, early detection of psychosomatic complaints (physical complaints with a strong underlying psychological element – especially vague, non-specific or minor medical complaints) in students with an "at risk" profile of developing mental disorders. A successful early detection campaign would reduce unnecessary (misdirected) medical consultations that often cause needless delays for students presenting with genuine (isolated) medical complaints.
- **Performance Indicator Planning** to enable UCT-SHS-MHS psychologists to determine performance indicators according to attendance patterns by measuring the average number of consultations required by various student subsets for mental disorders. These performance indicators could be employed to define the optimal number of consultations required by individual patients rather than the current arbitrary maximum of six consultations for any psychological disorder.
- **Black Student Issues Planning** to, inter alia, characterise mental disorders manifesting in Black UCT-SHS-MHS attendees which could be referred to either the African Gender Institute (Ms Carla Sutherland, inter alia) and/or the Equal Opportunities Officer (Mr Frank Molteno) for further attention.
- **Women's Issues Planning** to characterise mental disorders manifesting in female UCT-SHS-MHS attendees which could be referred to the UCT-Women's Movement (Ms Paula Kingwill) for further attention.
- **Non-traditional Aged Student Issues Planning** to, inter alia, characterise non-traditional aged (greater than 25 years) UCT-SHS-MHS attendees who constitute a specific subset of the student population. The impact upon their mental health (as assessed by various psychological or psychiatric complaints presenting at the UCT-SHS-MHS) of their (generally) increased burden of social and familial responsibilities should warrant special consideration from concerned University authorities.

[Issues raised in sections 6.3.2.4 and 6.3.2.5 (especially) as well as section 6.3.2.6 would serve to promote further networking and cooperation between the UCT-SHS-MHS and other (un)officially constituted student and/or university bodies.]

- **Academic Programme Planning** to provide academic programme (syllabus) planners with data detailing which faculties are presenting study courses that tend to elicit a disproportionately stressful response from students as measured by UCT-SHS-MHS psychological or psychiatric consultations. These findings could promote, inter alia, a

reassessment of individual course structure and content and/or a decision to provide increased tutoring of disaffected students.

- **Academic Performance Enhancement Planning (Staff)** to document, together with additional background and follow-up academic data, the (beneficial) effect of psychological evaluation and therapeutic intervention upon academic performance in students suffering from mental disorders. Both medical and academic staff, by assessing the magnitude of this effect, would have been able to network and coordinate their activities to optimise the benefits of treatment and, where necessary, guide students to deal with university bureaucracy.

[Also refer to section 6.4.3, "Suggestions for Future Research".]

- **Academic Performance Enhancement Planning (Students)** to promote, once advertised through appropriate student organisations, the utilisation of UCT-SHS-MHS therapeutic facilities by students with mental disorders. If left untreated, these psychological or psychiatric complaints could, either directly or indirectly, negatively impact upon these students' academic performance due to the consequences of, inter alia, inadequate concentration, poor retention skills and examination anxiety.
- **Student Advice Planning** to provide relevant University authorities (Student Advice and Development Centre: UCT-SADC counsellors) with a profile of students inclined to develop mental disorders. This data would assist the UCT-SADC to develop their own "at risk" profile to identify students who would merit special attention (more intensive assessment and counselling or referral to the UCT-SHS-MHS) when seeking assistance from the UCT-SADC.
- **Residence Planning** to provide relevant University authorities (Student Housing Organisation: UCT-SHO and various residence wardens) with a profile of students inclined to mental disorders. These "at risk" students could then be subject to routine preventive counselling by residence wardens to be assessed for signs of stress or adjustment disorders and possible subsequent referral to the UCT-SHS-MHS for professional evaluation.
- **Financial Assistance Planning** to provide relevant University authorities (Student Loans Department and Undergraduate Financial Aid Office: UCT-UFAO staff) with a profile of students inclined to mental disorders. These "at risk" students could then be subject to routine basic screening by UCT-UFAO staff to be assessed for signs of stress or adjustment disorders and possible subsequent referral to the UCT-SHS-MHS for professional evaluation.
- **Mental Health Awareness and Education Planning** to promote general mental health awareness and education of students by providing information about various mental disorders that have been assessed as commonly occurring on campus and to enlighten student attitudes towards mental illness by removing any social stigma related to receiving psychotherapy. Thereby, more students suffering from psychological or psychiatric complaints amenable to treatment would be prepared to attend the UCT-SHS-MHS for evaluation and possible therapeutic intervention.
- **Preventive and Promotive Health Planning (Monitoring)** to constitute a valuable base line to determine the effectiveness of (possible future) preventive and promotive mental health care programmes to be held at the University of Cape Town amongst various student categories – including those that have been assessed (according to previously described demographic, academic, residential (home address) and financial assistance variables) as "at risk" for various psychological or psychiatric complaints.
- **Further Research Planning** to constitute the initial stage (pilot study) of a more definitive investigation of mental disorders affecting University of Cape Town students. This investigation would comprise a (series of) follow-up prospective study(ies) screening students entering, inter alia, the UCT-SHS and/or the UCT-SADC.

6.4 RECOMMENDATIONS

A fairly brief outline of various background management, psychological and sociological considerations that are relevant to the specific recommendations documented below appears in Appendix X. These include health management and planning concepts that relate to University authorities, prevention of mental illness which relates to the actual preventive strategy/ies to be implemented and the complex but highly relevant material overviewing the principles of behavioural modification. This material, which is incorporated into this section, is highly relevant to the formulation and implementation of recommendations to reduce the prevalence and impact of mental disorders affecting students of the University of Cape Town.

This section is divided into five subsections. The first subsection details specific interventions (including outreach programmes and further research) that could be implemented by selected student service-orientated departments (the Student Development and Services Department (UCT-SDSD), the Student Health Service (UCT-SHS), the Student Advice and Development Centre (UCT-SADC), the Undergraduate Financial Aid Office (UCT-UFAO), the Student Housing Office (UCT-SHO) and the Academic Development Programme (UCT-ADP) in order to improve the mental health of students attending the University of Cape Town. The second subsection documents specific interventions (again, where appropriate, including outreach programmes and further research) that could be applied to selected student groups and selected mental disorders presenting at the UCT-SHS for evaluation and/or therapeutic intervention. The third subsection outlines suggestions for future research (in addition to those included in the preceding subsections) that could be either undertaken or requisitioned by relevant University authorities in order to obtain a fuller understanding of factors that may positively or negatively impact upon the mental well-being of students attending the University of Cape Town. The fourth subsection complements the above material by briefly examining the potential implications of a reduced University entrance requirement (which is a possible future development as the neighbouring University of the Western Cape (UWC) has recently introduced this new admission criterion as a method for making their university more accessible to historically disadvantaged and educationally underprepared students) on prospective students attending the University under these circumstances. The fifth subsection introduces the two important and interlinked principles of health promotion and community participation that should underpin any interventive programmes introduced by the University in an attempt to reduce the prevalence of mental disorders within the total student community.

> *However well one selects people and tries to encourage their development, if the institutional culture remains unaltered, the chances of long-term success are low. Institutional cultures reflect the collective and cumulative customs, rituals, symbols and preferences of the people flowing through them over time. It is not surprising that most institutions in South Africa, including UCT, have a dominant white male culture. It would be surprising if that were not the case. The problem is not the existence of the culture but the need to acknowledge it, examine it and change aspects of it that prevent its members from realising their full potential.*
>
> (Ramphele, 1996; p. 208)

The outgoing Vice-Chancellor, in her autobiography, provides eloquent commentary concerning the background realities existing at the University of Cape Town that impacted (and probably still impact) on her goal of achieving equity - including the ongoing transformation process – within all University structures at both the student and staff level. This research, which investigates the characteristics of students attending the UCT-SHS-MHS for evaluation and/or therapeutic intervention of psychological or psychiatric complaints, is placed within this dynamic and uncertain background of rapid ongoing change. Furthermore, it is fitting that the specific recommendations that follow may indeed involve relevant University authorities examining and changing certain aspects of the institutional culture that do potentially prevent its student members from realising their full potential.

> *UCT is a complex institution. This is implicit in the idea of a setting where people "live, learn, love, work and play". Contradictions and conflict of interests are implicit within such a setting.*
>
> (Mukoma, 1999; p. 48)

This statement complements that of the Vice-Chancellor by noting that it may prove particularly difficult to institute changes within both the University structures and institutional culture that will prove acceptable to the vast majority of students and staff. Therefore it is one thing to propose specific recommendations that should improve the quality of the educational process for students attending the University but quite another to persuade relevant University authorities to implement these suggestions. It is the duty of the University executive and senior management to resolve conflicts of interest that may exist between members of the various non-academic and/or academic departments that may hinder the successful implementation of measures to reduce the prevalence of mental disorders amongst the student body. This may involve the adoption of measures that could be unpopular with certain sections of the University community.

Although the primary focus of this study is to characterise students receiving mental health services at the University of Cape Town via the UCT-SHS-MHS, it is appropriate to extend the specific recommendations to include the other student service-orientated facilities detailed in Appendix IX. These University departments are not only the potential beneficiaries of the UCT-SHS study but are also (with the exception of the UCT Academic Development Programme) functionally linked to the UCT-SHS-MHS through the report of the Subcommittee established by the former Student Affairs Committee to investigate the provision of counselling services in the former Student Affairs Department (UCT-SAD/SAF). Therefore this section will be divided along the lines of these student service-orientated departments in order to highlight any strategies that could be implemented by relevant University authorities to improve the mental health of students attending the University of Cape Town. Further specific recommendations referring to selected student groups and selected mental disorders seen at the UCT-SHS-MHS are also subsequently included in order to provide an outline of additional remedial measures that relevant University authorities could implement to help specific members of the student body who may be in need of assistance. Additional commentary, where appropriate, is delivered concerning either further research that could be conducted by the various student service-orientated facilities outlined in this section or research-related findings detailed in Chapter 5 that need to be further investigated in future research projects.

6.4.1 Selected Student Service-orientated Departments

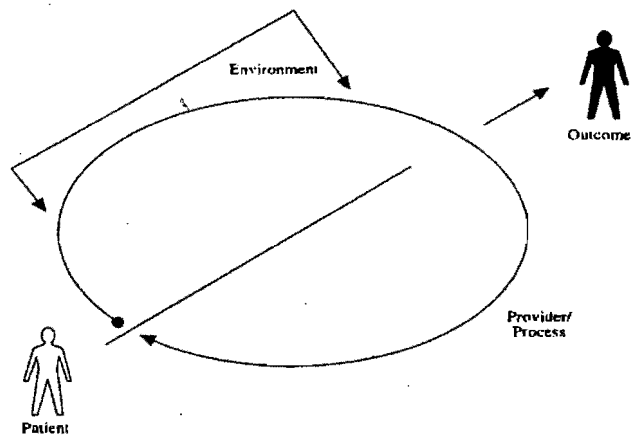
6.4.1.1 Student Development and Services Department (UCT-SDSD) and Component Sections

(a) University of Cape Town Student Development and Services Department (UCT-SDSD)

The function of the UCT-SDSD is to support and facilitate student activities – including managing the University's undergraduate financial aid programme and providing student advice services and student health services. (Refer to Appendix IXa for further details.)

A highly relevant aspect of health care delivery (undertaken within the University by the UCT-SDSD by means of the UCT-SHS-MHS) is that of quality management. A model that has been developed to measure the quality of health care provided to the patient is the Health Production Model (Goldschmidt, 1976; Wilson and Goldschmidt, 1995). This model proposes that patient outcomes result from the following three sets of variables and their interactions: (i) the patient's preintervention characteristics – in the UCT-SHS study these are documented according to the selected demographic, academic, residential (home address), financial assistance and clinical (diagnostic) variables relating to UCT-SHS-MHS attendees; (ii) the intervention process – in the UCT-SHS study this is characterised by the number of consultations required during the therapeutic process at the UCT-SHS-MHS, and (iii) the environment in which the intervention takes place – in the UCT-SHS study this encompasses the University, in general, and the UCT-SHS-MHS, in particular. In pursuance of this model: (i) this subdivision documents a series of suggestions that, if implemented, would substantially improve the quality of the University environment for students registered at UCT (this encompasses the third set of variables included in the Health Production Model); (ii) the following subdivision outlines a series of recommendations that relate to the functioning and service delivery by the UCT-SHS-MHS (this encompasses the second set of variables included in the Health Production Model), and (iii) sections 6.4.2.1 and 6.4.2.2 are both divided into several subdivisions which incorporate various measures that could be adopted to assist the selected student groups and selected mental disorders, respectively, presenting at the UCT-SHS-MHS (this encompasses the first set of variables included in the Health Production Model). Figure 6.6 illustrates the relationship that exists between the three sets of variables contained in the Health Production Model, viz. the patient (the UCT-SHS-MHS attendee), the health care provider (the UCT-SDSD by means of the UCT-SHS-MHS) and the environment (the University of Cape Town). Relevant University authorities should anticipate the possibility of unexpected interactions ensuing between these separate but interrelated variables when considering the respective merits of the Specific Recommendations contained in this section – although it is not possible to predict totally unforeseen consequences that may arise from the implementation of various preventive interventive strategies.

Figure 6.6 Components of the Health Production Model (from Wilson and Goldschmidt, 1995).



(i) Defining an ethos for the UCT-SDSD

- Attempt to make the University environment less threatening to students (e.g. historically disadvantaged Black students) who derive from a background that is appreciably different to the predominantly Eurocentric culture of the institution.
- Actively promote the spread of mental health issues beyond either the academic environment of the Psychology Department and the clinical environments of the UCT-SHS-MHS and other student service-orientated facilities that offer counselling services on-campus (Gelman, 1999).
- Scrutinise all aspects of University policy (both proposed and existing policies) for their impact on student well-being and reject policies that will impact negatively on them (Mukoma, 1999).
- Maximise consultation with the student community concerning policy and planning issues that might affect them so that they can meaningfully participate in and influence their setting (Mukoma, 1999).

(ii) Defining aspects of service development

- Ensure that there is an equitable spread of resources to adequately address general student health as well as student mental health issues.
- Employ more Black non-academic staff (as well as encourage the appointment of a greater number of Black tutors and lecturers) so that Black students would have role models to whom they can relate and feel free to approach with various non-academic (and academic) problems.
- Ensure that UCT-SHS-MHS management are provided with managerial skills up-dates, training and support to facilitate the efficient and humane running and development of this student service-orientated facility.
- Plan programmes and environments to facilitate social-recreation pursuits (Ragheb and McKinney, 1993):
  - The Student Union should be planned, equipped and furnished to function as the family room of the campus.
  - Environments on campus should be designed leisurely to allow for social contacts.
  - Informal libraries and settings should be made available to increase listening to radios, watching television and reading non-academic materials.
- Formalise the role of the "Wellness Forum" to enable it to make meaningful and informed decisions concerning services to be rendered to students that will cater to their physical, emotional, mental and social well-being.

Furthermore, this body should obtain a wider representation of staff and students to serve on it in addition to the current membership which includes staff from:

- the Student Advice and Development Centre (UCT-SADC).
- the Student Health Service (UCT-SHS).
- the University-administered residences in the form of Residence Development Officers (RDOs).

(iii) Defining potential outreach programmes

- Utilise existing organisational structures and lines of authority to deliver informed outreach/preventive programmes designed to prevent emotional problems amongst students (De Armond et al., 1973).
- Ensure that students do not harbour false expectations of what the university can offer them in terms of the teaching and learning situation (Honikman, 1982).
- Implement student development programmes (such as that conducted at Eastern New Mexico University (Walsh, 1979 and 1985) – refer to Appendix X for further details). The quoted programme consists of six modules:
  - Self-assessment and development, which assists students in understanding and developing their personal lives through various individual assessment inventories.
  - Academic planning and development, which enables students to plan their academic direction by helping them assess their academic interests and develop strategies to complete degree requirements.
  - Career planning and development, which helps students determine career alternatives or clarify current choices through the use of a career inventory; (iv) planning your schedule, which details the resources available at the university and various strategies for preparing class schedules.
  - Decision making, which illustrates various ways and procedures helpful in making educational and life-pursuit decisions.
  - Familiarisation with campus resources, which points out information about services available at the university for students and rules and regulations for students attending the university.
- Orientate students to the geographical layout of the University as many students feel intimidated by the size of the institution (Mukoma, 1999). This would facilitate the adjustment of students to the University.
- During orientation week, before the commencement of the first term, provide new students with detailed and accurate information concerning the nature of the demands they are likely to encounter at the University and where they can obtain help when needed.
- Produce improved descriptive catalogues covering campus life – including details of counselling services available to students (Glasscote et al., 1973).
- Sponsor student preadmission visits to the UCT-SHS-MHS (Glasscote, Fishman and Reifler, 1973).
- Inculcate healthy lifestyles and behaviour in students (Mukoma, 1999).
- Appoint designated tutors/counsellors with whom students could talk and discuss their problems. This position would not require the specialised services offered by a clinical psychologist, a departmental adviser or a careers guidance officer (Honikman, 1982). Instead such a tutor/counsellor should:
  - be able to give advice on a wide range of problems which include academic, social and emotional ones.
  - possibly be a senior person connected to the University in some way.
  - have knowledge of both the staff and student experience.
  - be particularly sensitive and empathetic.
- Employ senior students as mentors to assist new students with:
  - learning new academic skills or improving standards of performance so as to meet institutional demands and personal levels of aspiration.

- finding alternative pathways to personal fulfilment in the new situation and new bases for evaluating their potentialities.
- developing alternative acceptable uses of time and energy.
- emotional support, academic guidance and orientation.

[Such a programme has been successfully employed at the University of the Western Cape (Year Report, 1995 and 1996).]

- Focus on inter-racial relations and create racial harmony on campus by setting up structures to facilitate integration such as racially mixed peer group or mentoring schemes (Selikow, 1994).
- Provide prospective students (especially historically disadvantaged Black students) with as much information concerning the University as possible before they arrive at UCT in order to help remove some of their initial feelings of alienation (Honikman, 1982).

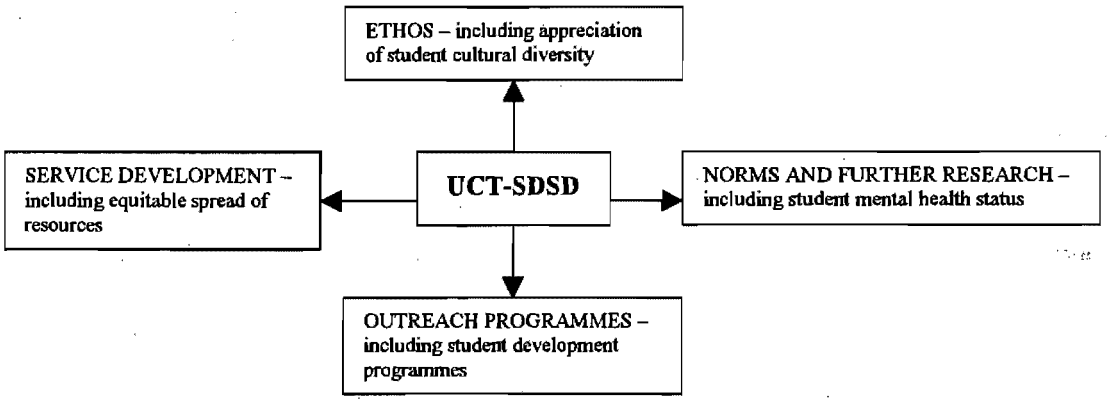
(iv) Conducting further research

- Conduct further and ongoing research during the course of the transformation process affecting the University of Cape Town - the UCT-SHS study coincides with the beginning of this process – to mirror the possible consequences of a student community in a state of transition. This situation could possibly lead to an increased incidence of, inter alia, adjustment disorders amongst students who are potentially vulnerable to these changes.
- Conduct a prospective study into the mental health status of the total student community (as opposed to attendees of the UCT-SHS-MHS) by means of a standardised questionnaire attached to all student registration forms completed at the beginning of the academic year. The contents of this questionnaire could:
  - relate to adolescent risk-taking behaviour.
  - address further socio-demographic factors relating , inter alia, to family structure or psychological factors relating to ego defence mechanisms.
  - investigate students' sense of adjustment to the University.
  - investigate students' sense of academic coping at the University.
  - investigate students' sense of coping financially at the University.
  - assess the role of sense of adjustment, sense of academic coping and sense of financial coping at the University as aetiological factors in the development of mental disorders within the student body.
- Investigate how students perceive their responsibilities, if any, to the University (Honikman, 1982). By encouraging students not only to accept responsibility for but also to take pride in being part of the University, authorities will be promoting the successful integration of a diverse range of individuals within the institution.
- Investigate students' expectations of the institution and its authorities with respect to:
  - curriculum content
  - evaluation of lecturers' ability as teachers (Honikman, 1982).

  Active student participation in the academic planning process may ultimately enhance their acceptance and enjoyment of study courses presented by the University. This, in turn, could promote their sense of well-being, leading to a decrease in the prevalence of mental disorders affecting the student body – some of which present in students attending the UCT-SHS or the UCT-SHS-MHS.
- Investigate student satisfaction with the University as measured by:
  - the extent to which they felt a part of the general campus social life (i.e. how comfortable they were in terms of their social integration).
  - whether many students had ever seriously considered leaving the University (Davis, 1986).

- Investigate whether Black students still find participation in the following non-academic activities problematic:
  - University sport.
  - the activities of societies.
  - the use of various other facilities (Honikman, 1982).

Figure 6.7 Summary of the interrelationship between ethos, service development, outreach programmes, norms and further research and specific recommendations proposed for the Student Development and Services Department (UCT-SDSD).



(b) University of Cape Town Student Health Service (UCT-SHS)

> *The ultimate focus ... should be to integrate, as far as possible, the formal mental health service into the on-going university programme both to expand its effect and to increase its accessibility by keeping its boundaries as permeable as possible.*
>
> (Craig, 1974; p. 300)

and

> *Interventions can be directed toward specific individuals in an attempt to increase the capacity of those individuals to deal with (or overcome or eliminate) the conditions bearing upon their present or potential distress.*
>
> (Reifler and Liptzin, 1969; p. 537)

with the consequence that

> *A measure of the success of a student-orientated service lies in the pattern of use that develops over time. If students perceive such a service to be operating in their interests, a heavy demand is likely. If not, services probably will be little used ...*
>
> (Amaranto and Wepman, 1978; p. 850)

These statements provide an eloquent commentary concerning not only the desired ethos of a college/ university mental health service (Craig, 1974, as well as Reifler and Liptzin, 1969) but also the likely positive response to the implementation of appropriate strategies to create a student-friendly service that will both appeal to the student community and directly meet its needs.

(i) Defining an ethos for the UCT-SHS-MHS

- Develop a specific Mission Statement which includes commentary on the care and needs of the UCT student community.
- Develop measurable objectives for the service which include the care and support of student mental health in general and UCT-SHS-MHS patients in particular.
- Management should promote the innovative development of services that ensure the best delivery of mental health care to the student community that is both affordable and cost-effective and avoids the inappropriate use of tertiary and specialist hospitals.
- Regularly view and update the stated Mission Statement and service objectives.
- Review service outcomes for the purpose of quality assessment (Flisher et al., 1998).
- Maximise its participation in, and involvement with, recognised student structures – such as the Student Representative Council (UCT-SRC).
- Be proactive in terms of addressing and challenging historical race, language, culture and gender inequities within the student community.
- Patients should be treated in a caring and supportive manner with dignity, courtesy and respect at all times.
- Offer therapies that reflect the best available evidence-based options that reflect internationally accepted and up-to-date medical standards (Flisher et al., 1998).
- Wherever possible, provide, create and persevere positive therapeutic relationships by seeking to ensure continuity of care with the same therapist.
- Inform the patient of the:
  - potential benefits of therapy.
  - potential adverse effects of therapy.
  - financial costs of therapy.
  - other foreseeable inconveniences associated with the provision of therapy.
- Provide individualised services for each patient according to the concept of "wraparound services" (Van den Berg, 1993; Van den Berg and Grealish, 1996). The International Initiative on the Development, Training and Evaluation of Wraparound Services (1992), quoted by Flisher, Grosser and Hoven (1999), define these services as interventions that are:
  - developed and/or approved by an interdisciplinary services team.
  - community-based and unconditional.
  - centred on the strengths of the student.

(ii) Defining aspects of service development

- Implement staffing ratios as suggested by the American College Health Association (ACHA) Recommended Standards and Practices for a College Health Program (1961), quoted by Schwarz (1967) in section 3.2.5, which recommends the following ratios:
  - for the UCT-SHS: one physician (medical officer) and one nurse per 1 000 students enrolled in the institution which would equate to 16 medical officers and 16 nurses. The author states that this ratio may appear high, particularly on larger campuses, but it probably has to be met at some universities so that intensive research can be carried out. The UCT-SHS is staffed by two full-time doctors (including the Director, who has many administrative duties), one part-time medical officer and others who are available for sessions during the week as well as three full-time and two sessional nursing sisters.

- for the UCT-SHS-MHS: serving approximately 16 000 students, it would require a total of 4 800 hours of psychologist and psychiatrist treatment. In addition, however, in order to practise preventive psychiatry and perform research that will promote the optimal atmosphere for learning, each member of the psychiatric team should spend about one-half of his/her time in individual student treatment and the other one-half in liaison and research activities. Thus, about 9 600 hours of staff time should be provided. This would be concentrated in a period of approximately 30 weeks (circa early March to mid-November at the University of Cape Town), thereby translating to about 320 hours of work from the psychiatric teams per week. If each member of the team works a 40 hour week, the UCT-SHS-MHS would require the equivalent of eight full-time members of the psychiatric team as a minimum, thereby providing a ratio of 0,5 psychiatric team members per 1 000 students. The UCT-SHS-MHS is staffed by a full-time clinical psychologist, four sessional clinical psychologists, a sessional psychiatric social worker, and a sessional (once weekly) consultant psychiatrist.

Both these staffing ratios are clearly well short of those recommended by Schwarz (1967). Consequently, the UCT-SHS-MHS is impeded from practising preventive psychiatry or conducting any meaningful research due to this lack of professional services.

- Ensure that each patient has an individual clinical care plan within their patient record that documents:
  - the patient's relevant history.
  - assessment.
  - diagnosis.
  - goals for care and treatment.
  - range of treatments (if appropriate).
  - support services required (if appropriate).
  - other service providers (if appropriate).
  - progress notes.
  - follow-up details.
  - outcomes.
  - relevant correspondence (if appropriate).
- The provision of emergency mental health services and care to students in the following circumstances:
  - suicide attempts or suicidal patients.
  - psychotic or confused states.
  - substance withdrawal or intoxicated patients.
  - counselling after trauma, violence or acute bereavement.
  - managing sexual abuse and rape.
- The use of culturally and gender-sensitive standardised clinical assessment and diagnostic systems, including:
  - the use of contextually valid, reliable and up-to-date assessment tools.
  - adequate understanding and formulation of the social, economic and traditional cultural factors in the patient's presenting complaint.
  - respect for the patient's alternative explanation and understanding of his/her illness (Flisher et al., 1998).
- Use a more structured approach to the assessment and management of patients by employing functional domains as appearing in, for example, the Individualised Needs for Service Assessment (INSA) for documenting the range of difficulties affecting the patient. These domains, which are rated according to a four-point scale ranging from "no problem" to "severe problem", seem imminently suitable for usage in a college/university mental health service and are as follows:
  - self-care.
  - family life.
  - social and interpersonal relationships.

- learning, academic performance, vocational development.
- disruptive behaviour.
- mood symptoms.
- anxiety symptoms.
- symptoms of psychosis.
- attention deficit and/or hyperactivity symptoms.
- alcohol and/or other substance abuse.

[Note: As INSA was specifically developed for the needs assessment of children and adolescents with serious emotional disturbance, some of the domains (especially attention deficit and/or hyperactivity symptoms) may have to be recontextualised to the student age-group.]

- Link the needs of the patient in the areas of clinical and social functioning (according to the functional domains in INSA) with the services that are currently being provided by the UCT-SHS-MHS in order to produce individualised assessments of need status. Need status can fall into one of the following categories:
  - No need – there is no problem and no action is indicated.
  - Met need – a need has attracted some at least partly effective intervention and no other interventions of greater effectiveness exist.
  - Unmet need – need has attracted only partly effective intervention or no intervention and no other interventions of greater potential effectiveness exist.
  - No meetable need – there is a need but there are no possible interventions that are even partly effective.
  - Overprovision – services are being provided in the absence of a need for these services (Brewin et al., 1987, quoted by Flisher, Grosser and Hoven, 1999).
- Resident therapists should document the following details relating to the psychotherapeutic intervention employed:
  - the type of individual psychotherapy employed (e.g. behavioural therapy, psychodynamic therapy).
  - the functional domains for which the psychotherapy was being provided.
  - the perceived effectiveness of the psychotherapy.
  - the perceived acceptability of the psychotherapy to the patient (Flisher, Grosser and Hoven, 1999).
- The provision of therapeutic regimes to students which seek to:
  - maintain and remediate function to be able to successfully pursue their academic careers.
  - develop appropriate coping and daily living skills to be able to remain on campus.
  - develop a positive and clear sense of self-identity.
  - manage stress and live and cope with their psychiatric symptoms and condition.
  - pursue healthy, positive and empowering lifestyles including recreation skills.
- Ensure that psychotropic drugs stored at the UCT-SHS and prescribed by the resident psychiatrist or medical officers:
  - should contain one alternative class of medication for most psychiatric disorders to ensure essential choice.
  - are newer drugs with better profiles that have replaced older drugs with poor cost-benefit/risk ratios.
  - are chosen and prescribed according to the following criteria:
    quality control
    cost
    safety
    tolerability
    efficacy (Flisher et al., 1998).
- Inform patients about the drugs prescribed to them by the resident psychiatrist or medical officers with respect to:
  - various drug options and available choices.
  - the prescribed drugs possible adverse effects.
  - the proposed length of the medication course.

  - information and education on self-monitoring of medication side effects.
  - information and education on adverse effects specific to female students (e.g. pregnancy risks) (Flisher et al., 1998).
- Re-engage with students who prematurely terminate their therapy by not attending their follow-up appointments.
- Assist the patient to identify early warning signs which may indicate the need for renewed contact with the UCT-SHS-MHS (e.g. intensity or change in symptoms or distress).
- Document guidelines and procedures which ensure the protection of patient confidentiality and privacy, which are communicated to them in an accessible manner. This would include the security of:
  - clinical notes.
  - relevant reports (if appropriate).
  - patient files.
  - computerised records.
- Ensure that their clinical records are both complete and accurate – this would entail the chain of command from medical officers, psychologists and psychiatrist (as well as, possibly, nursing sisters) to the clinic secretary who transfers data from the Patients Stat Details Sheets into the computerised record system. This would entail:
  - legibility of clinical notes and entries in Patient Stat Details Sheets.
  - accuracy of clinical notes and entries in Patient Stat Details Sheets.
  - completeness of clinical notes and entries in Patient Stat Details Sheets.
- Ensure that therapists participate in training, educational and professional development regarding student mental health care so that:
  - procedures exist to allow therapists time off work to attend training courses and other professional development activities.
  - therapists are kept informed about available courses and key developments in their field.
- Ensure that all reception and other clerical staff should receive adequate training and instruction on assisting UCT-SHS-MHS patients in an informed, non-discriminatory manner.
- Medical officers and nursing staff, especially, must be trained to be able to recognise background psychological or psychiatric complaints that may contribute to the development of physical complaints presenting at the UCT-SHS (i.e. improve the passage of patients through Filter 2 of the Goldberg and Huxley, 1980 model).
- Medical officers and nursing staff should endeavour to improve their detection rate of minor psychiatric morbidity from circa 25 per cent (from Gelman, 1999, employing the Health Staff Rating (HSR) questionnaire) to reduce the 75 per cent rate of "hidden psychiatric morbidity" (compare to the findings of the Self-Reporting Questionnaire (SRQ)-25) existing in UCT-SHS attendees.
- Include appropriately trained Black (especially African) therapists in their professional staff in order to not only further enhance training and knowledge of common indigenous psychological and psychiatric presentations but also to improve the representivity of the UCT-SHS-MHS in the eyes of historically disadvantaged Black students.
- Reduce any possible reticence that medical officers may experience in recording a psychological or psychiatric diagnosis for patients presenting with co-existing mental disorders.
- Resident therapists should be aware of possible cultural factors that may be unique to the individual subsets of African students (as assessed by the demographic variable of language) who may seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS – including different culturally appropriate forms of respect or offence.
- Resident medical officers should be aware (from the results obtained from Objective 2 of this study) that historically disadvantaged Black students are more likely than their generally historically advantaged White students to somatise their psychological or psychiatric complaints.

- Resident medical officers and therapists should be aware of the close relationship between self-esteem and sexual function that is present in n many male students – especially in historically disadvantaged Black students (refer to corresponding subdivision, above, detailing sexual disorders for further details).
- Encourage resident psychologists, psychiatrist and medical officers to report ALL suspected clinical diagnoses in order to reduce the possible underreporting of a wide variety of specific diagnoses compared to other tertiary educational facilities elsewhere in the world reported in the Literature Review (i.e. more intensive reporting of presenting complaints).
- Reduce the level of unwillingness that students may experience in accepting a psychological or psychiatric diagnosis.
- Employ experienced staff who are aware of not only the developmental stage of the majority of their patients but also conscious of the complex interaction between the student and the University – including the magnitude of the adjustment process that must be successfully accomplished in order for the student to succeed in his/her academic endeavours. Therapists should, if necessary, be prepared to encourage their patients to:
  - emancipate themselves from their childhood home and parents to as great an extent as possible.
  - actively associate with young people of their own age.
  - seek different forms of independent living.
  - considerably change their schedule of studies.
  - change to another faculty.
  - (as a final option) discontinue their studies altogether (Kaila, 1958).

(iii) Defining potential outreach programmes

- Encourage students with situational or adjustment problems to talk to a psychologist or a psychiatrist without defining themselves as psychiatric patients (Reifler, Liptzin and Fox, 1967). Therefore, promote a growing sophistication among students and, hopefully, a corresponding weakening of the stigmata attached to seeking help for emotional disturbances.
- Encourage students concerned about the mental health of other students to report their concerns to the UCT-SHS-MHS - this incorporates the process of consultation and may occur in several forms (Pinkerton, 1994):
  - one student seeking consultation regarding another student.
  - one student seeking consultation regarding a group of students.
  - a group of students requesting help in dealing with one student.
  - a group of students requesting guidance in working with another group of students.
- Educate academic staff on when and where to refer students affected by mental health disorders (Gelman, 1999).
- Encourage African students to utilise the UCT-SHS-MHS in preference to seeking the assistance of a traditional healer which would involve breaking down various culture-specific attitudes and beliefs existing within this particular subset of students(refer to Appendix Xc for, inter alia, further details concerning the Health Beliefs Model and the five major components of persuasive communication for further details). Furthermore, resident psychologists, psychiatrist and medical officers who are predominantly White, female and middle-class, would need to become aware of culture-specific presentations.
- Co-ordinate counselling work performed at the UCT-SHS-MHS with that undertaken at Groote Schuur Hospital Psychiatry Outpatients Department with predominantly Health Sciences faculty (formerly Faculty of Medicine) students in order to obtain a more holistic picture of the student counselling needs of all the individual faculties.
- Encourage students who would normally consult with a private general practitioner or use other private mental health care facilities to rather attend the UCT-SHS-MHS for their mental health care needs in order to assemble a more

statistics concerning the level of severe mental illness affecting students attending the University of Cape Town (this would not necessarily measure the prevalence of mental disorders amongst the total student community).

- Encourage medical officers, wherever possible, to refer patients to the resident psychologists and psychiatrist (i.e. the passage of patients through Filter 3 of the Goldberg and Huxley, 1980 model).
- Conduct health promotion campaigns in order to both promote the concept of mental health and to increase the recognition of mental disorders amongst the total student community – specifically targeted at student subsets (such as male students, non-English first language speaking students, non-Arts, Music and Social Science and Humanities faculty students and students who reside outside of metropolitan Cape Town) who selectively underutilise the UCT-SHS-MHS – so that affected students would be more willing to seek assistance for psychological or psychiatric complaints that could produce severe functional impairment in both their academic and social performance (i.e. improve the passage of patients through Filter of the Goldberg and Huxley, 1980 model). This could be achieved through:
  - educational talks and debates.
  - information posters.
  - lunchtime talks in accessible venues.
  - leaflets.
  - plays.
  - lobbying over UCT (student community) radio.
  - liaison with wardens at UCT residences.
  - liaison with student leaders and student organisations.
  - training of members of residence house committees to intervene appropriately when necessary.
- Conduct preventative workshops for students covering such issues as:
  - adjustment to the university.
  - managing examination stress.
  - communication skills.
  - learning skills.
- Encourage subsets within the student body (such as female students and Arts, Music and Social Science and Humanities faculty students) who are particularly au fait with the role of the UCT-SHS-MHS in both addressing the cause and alleviating the effects of psychological or psychiatric complaints to highlight, amongst their peers, the benefits to be derived from attending this student service-orientated facility. These students could thereby encourage their less informed and more reticent peers to address mental health problems that, if left untreated, could seriously jeopardise their university careers.
- Utilise honours students in the Psychology Department to undertake either psychoeducational campaigns on campus or preventative campaigns informing students of, inter alia, the hazards of drug and alcohol abuse (Gelman, 1999).
- Train suitably qualified students to conduct a peer-counselling programme (such as the Companion Program initiated at American University, Washington, D.C. (McCarthy, Wasserman and Ferree, 1975) – refer to Appendix X for further details) where they could address the following issues:
  - social, assertive and study skills training.
  - handling depression.
  - dealing with crises.
- Co-ordinate the function of the UCT-SHS-MHS with that of, inter alia, residence wardens, faculty advisors and student advisors in order to optimise counselling services that are provided to students at the University (i.e. this step would be in keeping with the suggestions of the Subcommittee established by the Student Affairs Committee to review the provision of counselling services in the former Student Affairs Department (UCT-SAD/SAF) (refer to Appendix IX for further details).

- Maintain channels of communication with other non-governmental organisations (NGOs) and/or support groups (such as Lifeline, Rape Crisis, SANCA and the Drug Counselling Center) which could provide students with additional specific support and assistance.
- Strive to overcome ignorant beliefs existing amongst certain members of the University community (including lecturers and other University authorities) which could further compromise the position of students affected by mental disorders and lead to further functional impairment.
- Promote maximum accessibility to the UCT-SHS-MHS for ALL students at ALL times – however, it is recognised that financial constraints would severely negatively impact upon this recommendation which is widely espoused in the college/university mental health literature.

(iv) Defining norms and conducting further research

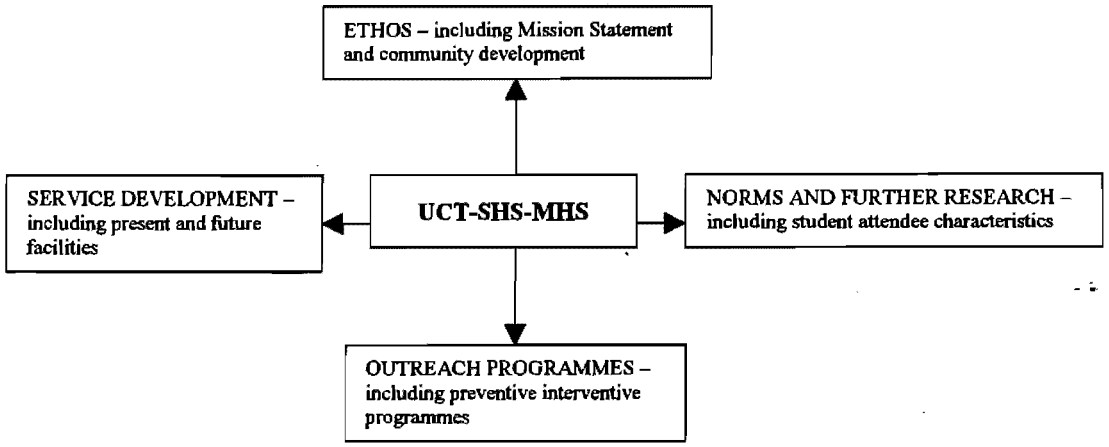
- Formulate a series of proposed norms (which refer to recommended levels of mental health care provision – specifically the recommended allocation of resources in the mental health system and recommended outcomes in the delivery of mental health care) by taking, inter alia, the following into account:
  - international existing service ratios for college/university mental health services.
  - international recommended service ratios (i.e. norms) for college/university mental health services.
  - application of the methodologies for norms development appearing in the literature.

  These norms would include:
  (i) "Readmission" rate which refers to the percentage of patients discharged from the UCT-SHS-MHS who subsequently reattend for further evaluation and/or therapeutic intervention for either the same or a different psychological or psychiatric complaint within a specific time period.
  (ii) Default rate which refers to the percentage of patients who default by premature termination of therapy (i.e. did not attend (DNA) appointments made at the UCT-SHS-MHS) (Flisher et al., 1998).
- Conduct further research into the characteristics of students attending the UCT-SHS-MHS for evaluation and/or therapeutic intervention of psychological or psychiatric complaints by means of requiring prospective patients to complete a fairly comprehensive standardised bibliographic data sheet prior to their initial consultation and resident therapists to complete a standardised psychological diagnostic fact sheet (possibly linked to a validated instrument (refer to section 6.1.1.2 for further details) after the initial consultation which could, if necessary, be periodically updated. The availability, subject to strict ethical criteria, of this additional information would facilitate more holistic research into factors related to the evolution and presentation of student mental disorders at the UCT-SHS-MHS.
- Investigate how the significant changes in the total student community following the transformation process have affected the client-specific profile of the UCT-SHS-MHS in order to obtain suitable data in order to assemble trends and evolving indicators.
- Conduct, under its auspices, further research to determine the true incidence and prevalence of mental disorders on campus to augment studies that have investigated mental disorders in students attending the UCT-SHS (Gelman, 1999) and the UCT-SHS-MHS (De Beer, 2000).
- Conduct Needs Assessment to determine whether it is successfully catering to the diverse individual needs of all members of the student body by delivering a service that is relevant to the vast majority of students registered at the University of Cape Town. Otherwise, in the wake of unattended mental disorders within various sectors of the student community, the UCT-SHS-MHS would clearly fail to address the UCT Mission Statement, which commits the University to promote equal opportunity and the full development of human potential.
- Investigate whether the response of the individual student to the treatment offered – often measured by the number of consultations required in order to effect a satisfactory improvement in the student's functional capacity – can often be

considered as a reflection of the competence of the therapist to deliver a service that is truly appropriate to the diverse needs of the multi-cultural society that currently exists within the University.

- Evaluate the outcome of any preventive interventive programmes that may have been initiated.

Figure 6.8 Summary of the interrelationship between ethos, service development, outreach programmes, norms and further research and specific recommendations proposed for the Student Health Service Mental Health Services (UCT-SHS-MHS).



(c) University of Cape Town Student Advice and Development Centre (UCT-SADC)

The function of the UCT-SADC is to give advice on a range of aspects affecting more disadvantaged students such as financial matters, bursaries and accommodation. It also counsels students with personal problems and performs crisis intervention. (Refer to Appendix IXa for further details.) Therefore this student service-orientated department should:

- improve student life skills (especially self-awareness and self-acceptance) (Mukoma, 1999).
- operate as a bona fide counselling centre serving the role of a walk-in clinic that caters for emergencies where no appointments are necessary – especially during examination time. This facility would complement the UCT-SHS-MHS which generally operates on an appointment only basis – although it does occasionally offer treatment to such unbooked emergencies during the examination period. The previous Dean of Students (Dr N. Mathabe) has identified the need for such an on-campus facility (Mukoma, 1999).

(d) University of Cape Town Undergraduate Financial Aid Office (UCT-UFAO)

The function of the UCT-UFAO is to provide bursary assistance to financially needy undergraduate students, loans for financially needy undergraduate and postgraduate students and scholarships for meritorious students. (Refer to Appendix IXa for further details.) Therefore this student service-orientated department should:

- improve student understanding of the process involved in the awarding of University-administered bursaries, loans and scholarships.
- refer unsuccessful candidates to other potential sources of funding.

6.4.1.2 University of Cape Town Student Housing Office (UCT-SHO)

The function of the UCT-SHO is to provide accommodation for students in University-administered residences. The wardens in charge of University-administered residences are responsible for the welfare of resident students by acting as advisors with regard to their physical, emotional, academic or other needs. (Refer to Appendix IXb for further details.) Therefore this student service-orientated department should:

- encourage racial and cultural interaction in the residences by not housing students according to racial lines (Mukoma, 1999).
- consider housing weaker students with poorer matric results (often historically disadvantaged and educationally underprepared Black students) in residences that are nearer campus and libraries rather than further disadvantage them by placing them in more inaccessible residences (e.g. Clarendon House, Liesbeeck, Gardens and Forest Hills) (Mukoma, 1999).
- run residence-specific student development programmes which include selected talks and seminars (e.g. "Tugwellness" programme instituted at Tugwell residence) (Mukoma, 1999). Such programmes would serve to enhance student self-esteem.
- prioritise the role of the Residence Development Officer (RDO) to actively promote the emotional, cultural, intellectual, spiritual, occupational and physical welfare of students.
- promote the development of peer-counselling programmes (such as that existing at Tugwell residence) in all University-administered residences.
- encourage a culture of learning in resident students.
- involve out-of-town students who live off campus (viz. not in University-administered residences) in residence activities to reduce any feelings of alienation and neglect they may feel. This would enable such students to
  - make friends.
  - establish a social network (Mukoma, 1999).

6.4.1.3 University of Cape Town Academic Development Programme (UCT-ADP)

The function of the UCT-ADP is not only to reduce the overall first year failure rate or to assist "weak" students but is to operate as a central element of UCT's response to the inequalities in South Africa's education system. It therefore has a particular concern for the educational needs of students who matriculated under the educational departments responsible for "Black" (African), "Coloured" and "Indian" education. Therefore this student service-orientated department should:

- aim to make the process of learning (especially for educationally underprepared students) an "enjoyable, stimulating and satisfying" experience in order to fulfil the requirements of the Ottawa Charter (WHO et al., 1986) (Mukoma, 1999).
- concentrate on improving the English-specific language skills in the historically disadvantaged and educationally underprepared Black students who require academic enhancement as, according to Selikow (1994), these students perceived their English skills as poor relative to their White counterparts.
- coordinate their service with other University structures in order to prevent the scenario depicted by Mukoma (1999) in Figure 6.9 below.

Figure 6.9 Referral pattern, involving the UCT-ADP, demonstrating a patent lack of coordination between different university departments for a student having difficulty with her academic work.

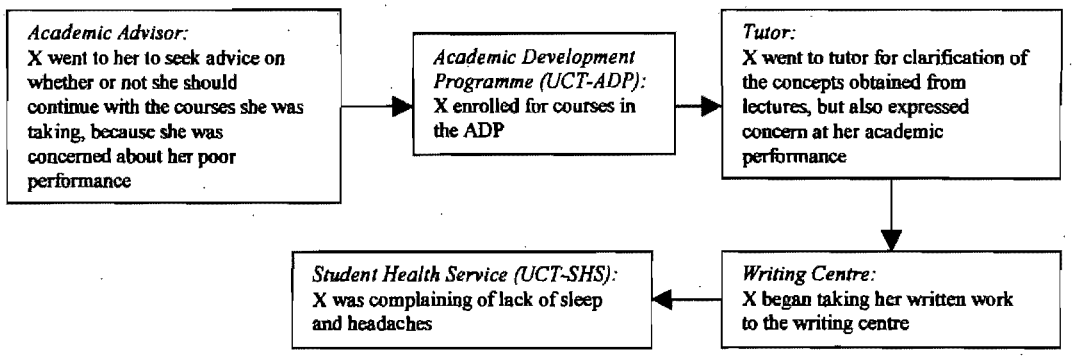
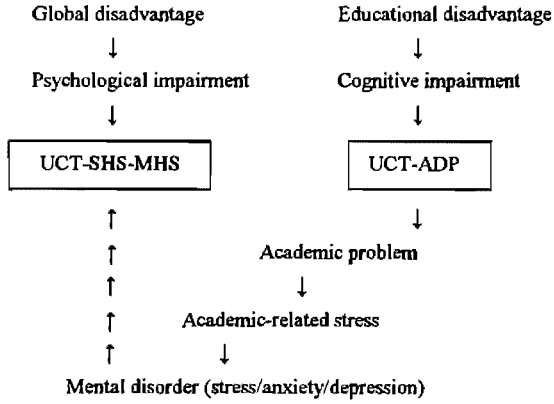


Figure 6.10, which complements Figure 6.11 appearing in section 6.4.2.1(b), illustrates the potential pathway that exists for historically disadvantaged Black students between UCT-SHS-MHS attendance for various psychological or psychiatric complaints requiring evaluation and/or therapeutic intervention and UCT-ADP attendance for educational underpreparedness. It also highlights the linkage between these two student service-orientated facilities initially suggested by the subcommittee established by the Student Affairs Committee to review the provision of counselling services in the former UCT-SAD/SAF and reinforces the need for further integration between them (also refer to Figure 6.9 above).

Historically disadvantaged Black students, due to the legacy of apartheid, are often globally disadvantaged (including environmental factors, service-related factors, disease-related factors and socio-economic factors) which could lead to psychological impairment and predisposition to various mental disorders presenting at the UCT-SHS and/or UCT-SHS-MHS (also refer to section 6.2.4.5 for PCG/suburb-specific data). A particularly important (and extremely relevant to this study) form of global disadvantage is educational disadvantage often leading to a state of relative cognitive impairment which could (and should) lead to students seeking remedial action at the UCT-ADP before they are affected by academic-related stress, a problematic adjustment to University life and mental disorders.

It is therefore imperative that all academic staff (especially lecturers and tutors of first year students) be acutely aware of the presence of academic problems affecting Black students. These problems could be either of a primary nature due to educational underpreparedness or of a secondary nature due to psychological impairment. Relevant University authorities should adopt appropriate measures to improve the coverage of the UCT-ADP and the accessibility and user-friendliness of the UCT-SHS-MHS amongst first year Black students who are traditionally at a higher risk of exclusion from the University on academic grounds than any other year group. Such strategies, aimed at improving the level of student retention amongst historically disadvantaged and educationally underprepared Black students, should prove highly cost-effective by providing major benefits to the University.

Figure 6.10 Schematic diagram illustrating the potential pathway that exists between UCT-SHS-MHS and UCT-ADP attendance for historically disadvantaged Black students.



6.4.2 Selected Student Groups and Selected Mental Disorders

6.4.2.1 Selected student groups

(a) Female students

Problem areas relating to female students have previously been highlighted in section 3.3.2.1 of the Literature Review and section 4.5.1 of the Methodology chapter. Therefore these students:

- have a lower threshold for referral to mental health services.
- are given more sanction to acknowledge emotional problems.
- are subject to gender discrimination and stereotyping.
- are subject to role conflict between the traditional female image in society and the emerging professional role of women.
- receive less family support of their career choice.
- are subject to increased familial responsibilities of caring for dependent children.

These findings based on research conducted in predominantly developed (first world) countries (particularly the USA) are confirmed by both the Objective 1 (attendee)-specific findings (528 versus 377 patients) as well as the corresponding Objective 3 (usage/utilisation rate per 1 000 students)-specific findings (54,4 versus 28,0) and Objective 4 (mean number of consultations)-specific findings (4,1 versus 3,4) detailed in section 5.1.2.1 of the Results chapter. In addition, the following research-related findings pertaining to female students need to be further investigated in future research projects:

- The reason why female students are significantly overrepresented by adjustment disorders while male students are correspondingly somewhat overrepresented by anxiety (neurotic) disorders presenting at the UCT-SHS-MHS. Possible reasons for this finding may include:
  - female students are more likely to present with classical symptoms of adjustment disorders while male students are more likely to present with classical symptoms of anxiety (neurotic) disorder.

- resident psychologists, psychiatrist and (where appropriate) medical officers are more likely to identify adjustment disorders in female students and anxiety (neurotic) disorders in male students presenting at the UCT-SHS-MHS.

In order to improve the circumstances affecting female students, the University should:

- remove any gender stereotyping that may currently exist on campus that might promote the development of psychological or psychiatric complaints amongst female students.
- provide day-care facilities for female students with young children so that they are more easily able to pursue an academic career by reducing some of the more onerous domestic duties and distractions to studying.

(b) Black students

Problem areas relating to Black students have previously been highlighted in section 3.3.2.2 of the Literature Review and section 4.5.2 of the Methodology chapter. Therefore these students:

- are historically disadvantaged.
- are educationally underprepared.
- represent a population at risk who are subject to intense adjustment problems on a strange new campus with a Eurocentric-orientated culture.
- are subject to increased social and familial responsibilities:
  - younger siblings.
  - dependent consorts.
  - children.

These observations are not confirmed by the Objective 1 (attendee)-specific findings (428 versus 477 patients) – although the composition of the student body is largely responsible for this result – but are, however, confirmed by the corresponding Objective 3 (usage/utilisation rate per 1 000 students)-specific findings (58,2 versus 30,2) detailed in section 5.1.2.2 of the Results chapter. In addition, the following research-related findings pertaining to Black students need to be further investigated in future research projects:

- The reason why the respective usage/utilisation rates per 1000 students recorded by the individual race/population groups stratified by female gender – but not male gender – would appear to mirror the perceived hierarchy of historical (dis)advantage existing under the previous dispensation (i.e. it is generally acknowledged that, as a rule, Africans were most severely affected and marginalized by the apartheid regime followed by the Coloured and Indian population groups who were, again as a rule, perceived to be somewhat less disadvantaged by this process than the former. Again, the candidate does, however, recognise that this form of generalisation is not only unscientific, but could also give rise to offence).
- The reason why historically disadvantaged African students require a lower mean number of consultations (an indirect measure of the level of intervention required according to the length of therapy required) than their generally historically advantaged White peers – as it would seem somewhat contradictory to assume that the majority of their disorders are minor complaints that can be easily be rectified. This research would ensure that these students receive optimal attention for their presenting psychological or psychiatric complaints which, if inadequately or inappropriately treated, could persist leading to sufficiently severe academic impairment as to impair threaten their University careers.

- Whether Coloured and Indian students really suffer from a higher prevalence of the more severe forms of minor psychiatric morbidity than their African peers although African students appear to be subject to a greater range of concerns(according to Gelman, 1999).

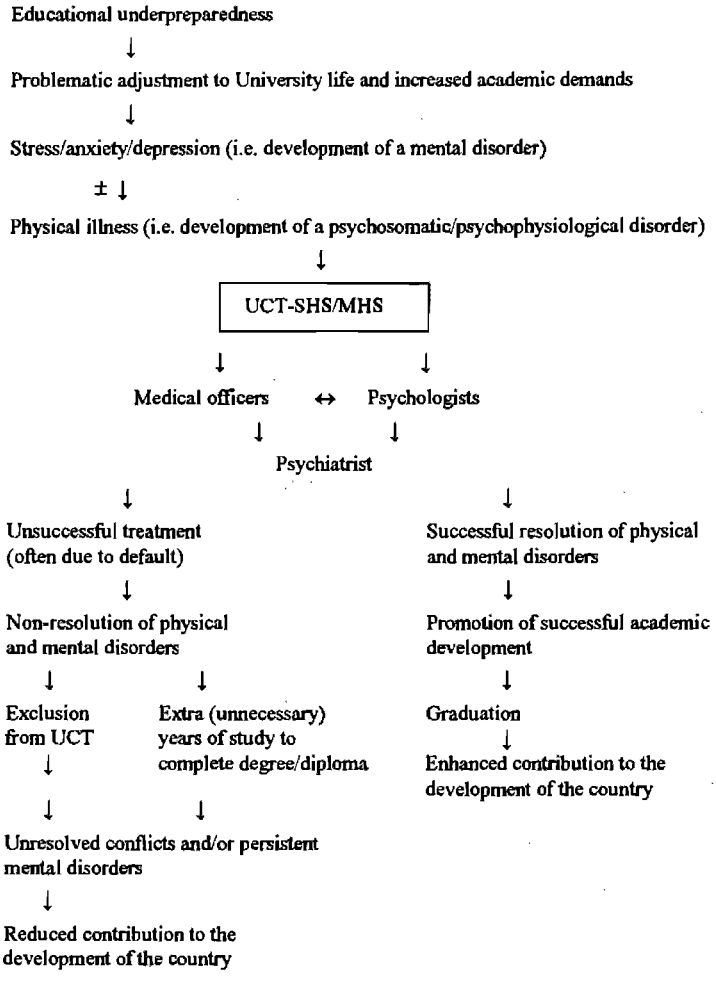
The Literature Review reports that this group of students tend to under-utilise resource facilities. This may be due to the fact that Black students felt that it was inappropriate to discuss personal adjustment issues with mental health services staff (Johnson, 1977; Walter and Miles, 1981). Carey and Swartz (1971) report that where the demands of Black students for an increasing number of Black counsellors and therapists have been met, there are suggestions that minority students have been less reluctant to come to traditional mental health facilities for assistance. Therefore, the UCT-SHS-MHS should:

- ensure that the predominantly White therapists are not ignorant of local culture-specific norms relevant to the African student body. The absence of such knowledge must not only negatively impact on both the diagnostic and therapeutic skills offered at the UCT-SHS-MHS but also substantially reduce the credibility of the whole psychotherapeutic process for these students. Such a situation would obviously lead many African students to seek alternative, more culture-sensitive venues for relief of their symptoms.

Figure 6.11, which complements Figure 6.10 appearing in section 6.4.1.3, illustrates the relationship that may exist between being an historically disadvantaged Black youth receiving an inferior education to their generally historically advantaged White peers and the increased risk of suffering from a problematic adjustment to University life resulting in a lack of well-being presenting as either a physical (psychosomatic) or psychological (stress, anxiety, depression, inter alia) complaint at either the UCT-SHS or the UCT-SHS-MHS, respectively.

Successful treatment at the UCT-SHS-MHS would resolve the presenting complaint/s and promote a successful academic career whereas unsuccessful treatment (including patient default for whatever reason or no treatment) would lead to continuing physical and/or mental impairment with consequent (often severe) academic impairment which might be severe enough to lead to failure and/or academic exclusion from the University with possible lifelong sequelae. Therefore, relevant University authorities should appreciate that the UCT-SHS-MHS could mean the difference between a successful graduate who could make a meaningful contribution to the development of the country and a dysfunctional individual who would possibly not only suffer from continuing psychological or psychiatric complaints but also from the burden of failure and consequent associated negative emotions such as misplaced anger and resentment. Consequently priority should be given to the implementation of measures designed to make this student service-orientated facility more accessible and user-friendly to this particular subset of students who are especially vulnerable to mental disorders (Gelman, 1999).

Figure 6.11 Schematic diagram illustrating the possible causation and consequences of UCT-SHS/MHS attendance for historically disadvantaged Black students.



(c) Students greater than or equal to 25 years of age

Problem areas relating to students greater than or equal to 25 years of age (viz. non-traditionally aged students) have previously been highlighted in section 3.3.2.4 of the Literature Review and section 4.5.3 of the Methodology chapter. Therefore these students:

- are often historically disadvantaged (therefore they are subject to the conditions outlined in Research Hypothesis II for Black students).
- are subject to low social integration with possible social isolation and a resultant sense of alienation.

However, these observations are not confirmed by either the Objective 1 (attendee)-specific findings (211 versus 694 patients) – although the composition of the student body is largely responsible for this result – or the corresponding Objective 3 (usage/utilisation rate per 1 000 students)-specific findings (28,6 versus 44,0) detailed in section 5.1.2.4 of the Results chapter. In the Literature Review Mechanic and Greenley (1976) observe that students with greater psychological distress are those who are relatively young as compared with

their classmates so that the young college/university student who is intellectually advanced, but who may be more "socially immature", may face special mental health problems. Therefore the University should:

- earnestly review its admission policy toward underaged students as it is highly doubtful that students of less than 15 years of age should be attending a tertiary educational institution.
- in the absence of the above, pay specific attention to the needs of underaged students by instituting targeted intervention programmes to enhance their adaptation to, inter alia, the non-academic demands of University life.

(d) Non-English first language speaking students

Problem areas relating to non-English first language speaking students have previously been highlighted in section 3.3.2.5 of the Literature Review and section 4.5.4 of the Methodology chapter. Therefore these students:

- are most often historically disadvantaged (therefore they are subject to the conditions outlined in Research Hypothesis II for Black students).
- have to study in, what is to them, a foreign language causing increased academic-related stress.

These observations are not confirmed by the Objective 1 (attendee)-specific findings (306 versus 599 patients) – although the composition of the student body is largely responsible for this result – but are, however, confirmed by the corresponding Objective 3 (usage/utilisation rate per 1 000 students)-specific findings (55,9 versus 33,9) detailed in section 5.1.2.5 of the Results chapter. In addition, the following research-related findings pertaining to non-English first language speaking students need to be further investigated in future research projects:

- The reason why these students, who are mainly historically disadvantaged Black students, are underrepresented for adjustment disorders relative to their English first language speaking peers, who are mainly White students. This unexpected finding, which is contrary to one of the major treatises of this study (that historically disadvantaged Black students would find the adjustment process extremely onerous that is required of them to meet the often exacting standards of a Eurocentric tertiary educational facility that is diametrically opposed to their culture), could be due to the following reasons:
  - Cultural factors that may have been missed by the predominantly White UCT-SHS-MHS therapists

The following measures could be adopted by relevant University authorities to rectify some of the abovementioned problem areas:

- Improvement of English writing (especially) skills amongst non-English first language speaking historically disadvantaged Black students within the framework of the Academic Development Programme (UCT-ADP) as, according to Selikow (1994), these students perceived their English skills as poor relative to their White counterparts.

(e) Arts, Music and Social Science and Humanities faculty students

Problem areas relating to Arts, Music and Social Science and Humanities faculty students have previously been highlighted in section 3.3.3.1 of the Literature Review and section 4.5.5 of the Methodology chapter. Therefore these students:

- have a propensity toward relatively abstract and subjective ideation.
- often undertake non-vocational courses.
- possibly more easily recognise and more willingly react to various psychological or psychiatric complaints.

These findings based on research conducted in predominantly developed (first world) countries (particularly the USA) are not confirmed by the Objective 1 (attendee)-specific findings (445 versus 460 patients) – although the composition of the student body is largely responsible for this result – but are, however, confirmed by the corresponding Objective 3 (usage/utilisation rate per 1 000 students)-specific findings (68,5 versus 27,6) and the Objective 4 (mean number of consultations)-specific findings (4,0 versus 3,7) detailed in section 5.1.3.1 of the Results chapter. Therefore, the UCT-SHS-MHS should:

- actively liaise with the faculty officer and dean as well as other academic authorities – including heads of department within the Humanities faculty (which would incorporate students registered within the erstwhile Arts, Music and Social Science and Humanities faculties) in order to plan and implement preventive interventive strategies to improve the well-being of, especially, students undertaking non-vocational courses.

(f) Undergraduate students

Problem areas relating to undergraduate students have previously been highlighted in section 3.3.3.2 of the Literature Review and section 4.5.6 of the Methodology chapter. Therefore these students:

- possibly display a greater willingness to seek help for emotional problems.
- require a greater level of skills acquisition to advance from novice to skilled professional, scholar or performer.
- are presented with a greater financial burden, especially historically disadvantaged students who are subject to the conditions outlined in Research Hypothesis II for Black students.

These findings based on research conducted in predominantly developed (first world) countries (particularly the USA) are confirmed by both the Objective 1 (attendee)-specific findings (755 versus 138 patients) as well as the corresponding Objective 3 (usage/utilisation rate per 1 000 students)-specific findings (50,3 versus 19,8) detailed in section 5.1.3.2 of the Results chapter. In the Literature Review, Pinkerton (1994) suggests the following additional causative factors could account for the underrepresentation of postgraduate students seen at the mental health service: (i) unwillingness to seek help (due to fear of not living up to an expectation – shared by the students and others – of greater self-sufficiency); (ii) greater use of denial, which may be a concomitant of men in the postgraduate student body, and (iii) accessibility factors. Therefore, the UCT-SHS-MHS should:

- encourage postgraduate students to make use of this facility by removing any possible stigma or feelings of weakness that may be associated with seeking therapeutic intervention.

(g) First year (freshman/fresher) students

Problem areas relating to first year (freshman/fresher) students have previously been highlighted in section 3.3.3.3 of the Literature Review and section 4.5.7 of the Methodology chapter. Therefore these students:

- may be subject to the "freshman myth" or the "matriculation myth".
- are liable to increased confusion and self-doubt due to:
  - new-found social freedom.
  - increased academic responsibility.
  - less academic success and fewer accolades.
- are less experienced in methods of studying.
- are less experienced in English as the medium of instruction used – if they are historically disadvantaged students who are subject to the conditions outlined in Research Hypothesis II for Black students.
- are less adjusted to social activities.

These findings based on research conducted in predominantly developed (first world) countries (particularly the USA) are confirmed by both the Objective 1 (attendee)-specific findings (474 versus 374 patients) as well as the corresponding Objective 3 (usage/utilisation rate per 1 000 students)-specific findings (50,6 versus 39,3) detailed in section 5.1.3.3 of the Results chapter. More pronounced myth effect is associated with: (i) lesser participation in campus activities (Berdie, 1966); (ii) an increased likelihood of attending a mental health service (an agency offering psychodiagnostic and psychotherapeutic services to the college/university community) during the freshman/fresher year (Baker, McNeil and Siryk, 1985); (iii) poorer academic performance in college/university (Lauterbach and Vielhaber, 1966) – this finding could have relevance to historically disadvantaged and educationally underprepared Black students; (iv) more frequent change in major courses (Herr, 1971; Shaw, 1968); (v) a lesser likelihood of graduating on time (i.e. within eight semesters from matriculation or generally accepted course duration) (Baker, McNeil and Siryk, 1985), and (vi) a higher incidence of leaving college/university before graduation (Shaw, 1968).

Results obtained in this study as well as corresponding local findings detailed by Naidoo (1997) suggest that students (especially historically disadvantaged Black students) attending both the University of Cape Town and the University of the Western Cape could require a prolonged period of time to adequately adjust to the complex academic and social demands of a tertiary educational institution that is often profoundly at odds with their cultural background. On the other hand, it would appear that students attending college/university in the USA are more likely to develop mental health problems toward the completion of their undergraduate careers when uncertainty concerning their non-academic future arise. The UCT-SHS-MHS result suggests that local students seem rather to concentrate their efforts on completing their academic studies before concerning themselves with their future careers. This approach could possibly lead to these students developing the mental health problems which affect their American peers in their later years of study only after they have left the relative support of the university environment. This could lead to considerable psychological morbidity and negatively impact upon their future careers. Other reasons relating to local factors affecting the different colleges/universities (e.g. the composition of the student body) could also be responsible for these different findings. Therefore the University should:

- be aware of the presence of the "freshman myth" or the "matriculation myth" concerning undue expectations that prospective students may harbour concerning the University.
- assist first year (freshman/fresher) students to cope with the newfound social freedom combined with increased academic responsibility (compared to high school) that confronts them and can serve to create a sense of confusion and self-doubt.

- encourage students to actively participate in both formal and informal extracurricular activities.
- investigate the underlying reasons behind any student's wish to change major courses and provide appropriate career-related advice and/or counselling to assist them in their decision-making.
- investigate the reasons behind students leaving the University before graduation in order to reduce the incidence of such failures in the system to retain gifted young people within the tertiary education system.
- encourage ALL final year students to make adequate use of appropriate University facilities, such as the Careers Office, in order to fully explore the range of opportunities that are available to them upon successful graduation.

(h) Students whose home address (as opposed to term address for out-of-town students) is outside metropolitan Cape Town

Problem areas relating to students whose home address is outside metropolitan Cape Town have previously been highlighted in section 3.3.4 of the Literature Review and section 4.5.8 of the Methodology chapter. Therefore these students:

- may experience insecurity, loneliness and doubt.
- may experience feelings of isolation and feelings of alienation.
- have substantially reduced support systems in the form of family and friends.
- may be subject to "uprooting disorders", especially if they are international (foreign) students.
- may have language difficulties if they are international (foreign) students or historically disadvantaged students who are subject to the conditions outlined in Research Hypothesis II for Black students.

These findings based on research conducted in predominantly developed (first world) countries (particularly the USA) are confirmed by both the Objective 1 (attendee)-specific findings (510 versus 395 patients) as well as the corresponding Objective 3 (usage/utilisation rate per 1 000 students)-specific findings (51,1 versus 30,0) and (barely) the Objective 4 (mean number of consultations)-specific findings (3,81 versus 3,79) detailed in section 5.1.4 of the Results chapter. In addition, the following research-related findings pertaining to students whose home address (as opposed to term address for out-of-town students) is outside metropolitan Cape Town need to be further investigated in future research projects:

- The proportion of students residing outside metropolitan Cape Town who are historically disadvantaged in order to assess whether there is any further linkage between this variable and the African and Coloured subcategories of the race/population group-specific variable characterising UCT-SHS-MHS attendees.
- The apparent association between increasing distance between home address and the University (with the notable exception of students residing in African and non-African countries outside South Africa) and a decreasing mean number of consultations required by students presenting with psychological or psychiatric complaints at the UCT-SHS-MHS. This relationship is not maintained for the usage/utilisation rate per 1000 students attending the UCT-SHS-MHS which bears no relationship to the residence (home address) of the student. This research would ensure that out-of-town students receive optimal attention for their mental disorders from resident therapists.

In the Literature Review, Rosecan, Fuqua and Blum (1992) suggest that first year and second year students may be more vulnerable to the psychological aspects of separating from the home setting since leaving home and familial loved ones to attend college/university represents, for most late adolescents, the longest and

most significant separation of their lives. This can, according to the authors, create and exacerbate vulnerabilities in students who are at risk for psychological problems.

Craig (1974) outlines primary preventive measures which might be undertaken by the student body and the administration to assist students with mental disorders who are living away from home. The following interventive mechanisms that could be instituted by the University are identified:

- Student orientation by the administration.
- The development of student leaders functioning as supportive personnel in daily contacts with students.
- The initiation of student-orientated groups led by students who had similar adjustment difficulties.

By such a three-tiered approach, the author suggests, the isolated student is first made aware of the stresses he/she may face at university and resources available to cope with these stresses (primary prevention), then troubled students may be identified early (secondary prevention) and, finally, appropriate treatment is available in the form of student groups. A third, rehabilitation, function also exists in that the student leaders in these groups are generally students who have experienced similar difficulties in the past. The author concludes by noting that all these activities go on outside the traditional mental health system.

Further measures that the University should adopt include:

- Closely monitor the physical and mental health of all first and second year students housed in University-administered residences.
- Be aware of the possible presence of "uprooting disorders" (Taft, 1977) in international (foreign) students attending the University and endeavour, wherever possible, to close the size of the gap between the culture that is familiar to the affected student and the prevailing culture at the University.

(i) Students eligible for or receiving UCT-administered financial aid

Problem areas relating to students who are receiving UCT-administered financial assistance have previously been highlighted in section 3.3.5 of the Literature Review and section 4.5.9 of the Methodology chapter. Therefore these students:

- are generally subject to a "habitus" that is not in accordance with the knowledge, attitudes and behaviour required by the tertiary education system.
- are required to become part of a complex social environment shaped in large part by various upper-middle class groups – especially historically disadvantaged students who are subject to the conditions outlined above for Black students.
- often do not have money for books.
- often have financial worries about family.
- often have to work part-time.
- may be unable to pay their fees.
- may not have the backing of their family in relation to studying at university.
- are often subject to the fear of failure that could result in a loss of bursaries and exclusion from university.

These findings based on research conducted in predominantly Southern African countries are not confirmed by the Objective 1 (attendee)-specific findings (227 versus 678 patients) – although the composition of the

student body is largely responsible for this result – but are, however, confirmed by the corresponding Objective 3 (usage/utilisation rate per 1 000 students)-specific findings (100,3 versus 32,4) and the Objective 4 (mean number of consultations)-specific findings (3,8 versus 3,7) detailed in section 5.1.5 of the Results chapter. The Literature Review has reported that Hawarden (1985 and 1992) notes the lack of money is the most pressing problem experienced by Black students at the University of the Witwatersrand and that there is an increasing number of students who do not have the material means to equip themselves for their studies – a situation which perpetuates the cycle of disadvantage. (There is no reason to believe that the situation relating to students attending the University of Cape Town is any different to this scenario.) Factors associated with lack of finances include: (i) not having money to buy books; (ii) financial worries about families, and (iii) having to work part-time (Selikow, 1994). This author states that financial insecurity adversely affects academic performance insofar as these students may be uncertain whether they will even be able to attend University the following year. Furthermore, Selikow (1994) observes that having a bursary does not, in itself, preclude financial difficulty. Indeed, Agar (1989) reports that bursaries do not cover all academic or personal financial expenses and often bursary money only becomes available well into the first term, thereby causing students to experience anxiety in this regard. Most Black students interviewed by Selikow (1994) spoke of the fear of failure which could result in a loss of bursaries and exclusion from the University leading to high levels of stress. Therefore the University should:

- where possible, increase the amount of financial aid awarded to historically disadvantaged students in order to reduce the prevalence of mental disorders associated with socio-economic deprivation – especially as such students can be expected to contribute an increasing proportion of UCT-SHS-MHS attendees as the University continues with its transformation process to enhance the representivity of the student body by registering an increasing number of disadvantaged students.

6.4.2.2 Selected mental disorders

(a) Affective disorder

This is the fifth (or least) most common major diagnostic category documented in students presenting at the UCT-SHS-MHS with the Objective 1 (attendee)-specific finding reporting 100 individual diagnoses and the Objective 3 (usage/utilisation (prevalence) rate per 1 000 students)-specific finding recording a figure of 4,3. Although affective disorders do not appear to be widespread among the University of Cape Town student body, professional staff must be acutely aware of the presence of underlying depressive reactions in students as they can, if left untreated, result in severe impairment in the ability to study and subsequent sharp decline in academic performance. According to Wright-Short (1967), this condition is not often recognised at examination time with often devastating consequences. Indeed, Nicholi (1967) notes that depression is by far the most frequent and the most significant causal factor in the decision of a student to interrupt or terminate his/her university experience. Students must therefore be:

- advised that self-doubts are an integral part of the normal adjustment process to the University (viz. that it is normal to become aware of a disparity between the ideal self and the real self as one of thousands of outstanding students struggling in a threatening competitive environment (Nicholi, 1967)).

- encouraged to openly discuss their feelings with their peers and, if necessary, with their tutors and lecturers – any students who, despite the above actions, are still feeling insecure and are subject to any symptoms of affective disorder should be encouraged to receive further assessment at the UCT-SHS-MHS. Such a procedure could possibly save the academic careers of several students who are annually forced to leave the University on, inter alia, academic grounds.

Staff must therefore be:

- aware that Black students' feelings of depression and anger could often be linked to problems in other areas of social, personal and academic adjustment to the University. These symptoms are directly related to their membership of a disadvantaged group and is often accompanied by feelings of inferiority, worthlessness, hostility, anger and fear, all of which impede their development as a person and negatively affect their academic performance and their interpersonal skills (Gibbs, 1975).

(b) Adjustment disorder

This is the most common major diagnostic category documented in students presenting at the UCT-SHS-MHS with the Objective 1 (attendee)-specific finding reporting 272 individual diagnoses and the Objective 3 (usage/utilisation (prevalence) rate per 1 000 students)-specific finding recording a figure of 11,7. Therefore, as adjustment problems seem to be particularly prevalent amongst students attending the University of Cape Town, relevant University authorities should institute measures to facilitate the acclimation of students to their new and, in many cases, threatening environment. Such measures should be:

- sensitive to the diverse cultures existing amongst the student body – especially those of historically disadvantaged Black students who generally derive from a culture that is profoundly at odds with the predominantly Eurocentric culture of the University. Appropriate orientation programmes for the benefit of these students, preferably initiated and supervised by sympathetic Black academic staff to highlight and resolve these very real cross-cultural problems, should hopefully prove most beneficial to these students.

(c) Relationship and family problems

These are the two most common individual V-codes documented in students presenting at the UCT-SHS-MHS with the Objective 1 (attendee)-specific findings reporting 88 and 50, respectively, individual diagnoses and the Objective 3 (usage/utilisation (prevalence) rate per 1 000 students)-specific findings recording figures of 3,8 and 2,2, respectively. Therefore, as relationship and family problems, if undiagnosed (especially in historically disadvantaged Black students), can produce a sufficiently severe level of academic impairment to have a potentially profound negative effect on the success of the student's studies, the UCT-SHS-MHS staff should:

- be aware of traditional values that may impact upon historically disadvantaged Black students, especially as:
  - the student may be depriving the family of much needed additional income and, thereby, creating greater financial and social strains for the whole family (viz. their circumscribed environment which limited their opportunities for adapting to new situations and their extended family structure which emphasizes collective priorities and goals and frequently does not reward individual efforts to achieve or to differentiate oneself from the rest of the family (Rainwater, 1967; Schulz, 1969)).

(d) Academic problem

This is the fifth (or least) most common individual V-code documented in students presenting at the UCT-SHS-MHS with the Objective 1 (attendee)-specific finding reporting 20 individual diagnoses and the Objective 3 (usage/utilisation (prevalence) rate per 1 000 students)-specific finding recording a figure of 0,9. However, as academic problems are possibly related to reasonable student needs unmet by the academic programme offered by the University at undergraduate level (Winer and Dorus, 1972), the University should:

- continue, through the Academic Development Programme (UCT-ADP), to strive to overcome academic difficulties affecting historically disadvantaged Black students as a result of poor high school preparation, poor study habits and a resultant lack of self-confidence. This programme is important:
  - due to the rapidly changing demographics of the student body consequent to the transformation process instituted by the University.
  - if these problems are not adequately addressed, the likely increased level of academic problems and resultant possible heightened psychological and psychiatric morbidity affecting these new students, could result in severe dissatisfaction amongst this rapidly growing sector of the student body with regard to the University's apparent indifference to their distress. This could, in turn, eventually culminate in the sort of student unrest that is currently affecting other Southern African tertiary educational institutions.

(e) Pre-and post termination counselling for unplanned/unwanted pregnancy

This is the third most common individual V-code documented in students presenting at the UCT-SHS-MHS with the Objective 1 (attendee)-specific finding reporting 28 individual diagnoses and the Objective 3 (usage/utilisation (prevalence) rate per 1 000 students)-specific finding recording a figure of 1,2. Pre- and post termination counselling for unplanned/unwanted pregnancy could be the result of a complex social and psychological interaction whereby, on the one hand, female students might feel socially obliged – in order to initially form and subsequently maintain stable relationships in a seemingly threatening and lonely environment where friendship is at a premium – to acquiesce to their male partners' sexual demands without an adequate knowledge and understanding of appropriate contraceptive methods while, on the other hand, male students might feel equally obliged to initiate such intimate relationships because of a threatened self-identity – due to the same threatening and potentially humiliating environment where success is at a premium – feel the need to exert themselves in a sexual way in order to compensate for rapidly diminishing levels of self-esteem. (This hypothesis, which has been generated from the candidate's personal observations, is further discussed, below, in the subdivision detailing sexual disorder.) Therefore, the University should:

- introduce self-assertiveness programmes whereby female students can feel empowered to resist the unwelcome sexual advances of male students.
- make ALL students (both males and females) fully aware of the range and scope of sexual harassment.
- provide a comprehensive on-campus family planning service to students – whereby the current service offered by the UCT-SHS is complemented by corresponding Upper Campus facilities that may be more accessible to the vast majority of students.
- provide an appropriate forum for single students to meet socially in a non-threatening environment.

- encourage male students to take responsibility for unplanned/unwanted pregnancies by accompanying their partners to the UCT-SHS-MHS to become intimately involved in the counselling process.

(f) Personality disorder

This is the second most common selected "other" diagnosis documented in students presenting at the UCT-SHS-MHS with the Objective 1 (attendee)-specific finding reporting 16 individual diagnoses and the Objective 3 (usage/utilisation (prevalence) rate per 1 000 students)-specific finding recording a figure of 0,7. As short-term therapeutic results cannot be expected in the majority of cases with this disorder (Swartz, Posin and Kaye, 1958), the UCT-SHS-MHS should:

- re-evaluate the maximum of six consultations per patient strategy when treating a student who presents at the UCT-SHS-MHS with this potentially debilitating condition.

(g) Psychosomatic/psychophysiological disorder

This important disorder is not recorded on the UCT-SHS "Patients Stat Details Sheet" with the result that no student attendees were assessed by resident professional staff as recording this specific disorder at the UCT-SHS-MHS during the study period of 1991 to 1993. This result certainly does not imply the complete absence of this potentially meaningful mental and physical disorder amongst UCT-SHS-MHS presentations. Therefore the UCT-SHS-MHS should:

- introduce this diagnosis into its coding system to appear on the "Patients Stat Details Sheet" completed by resident psychologists, psychiatrist and medical officers.
- professional staff must be aware of culture-specific complaints affecting historically disadvantaged Black students which may appear bizarre to the predominantly White, female and middle-class therapist, medical officer or nursing sister. If this underlying complaint is missed, it could lead the student to an ever-increasing state of agitation and obsession with the presenting medical complaint which would, in turn, inevitably lead to a corresponding decrease in functional ability.

(h) Psychotic disorder

This is the fifth (or least) most common selected "other" diagnosis documented in students presenting at the UCT-SHS-MHS with the Objective 1 (attendee)-specific finding reporting only six individual diagnoses and the Objective 3 (usage/utilisation (prevalence) rate per 1 000 students)-specific finding recording a figure of 0,3. However, in the Literature Review it was noted that Craig (1972) suggests a relatively high proportion of students who experience psychotic episodes may go unrecognised by the student mental health service until their emotional distress causes them to drop out of the academic system entirely. Therefore the UCT-SHS-MHS should:

- develop much more intensive casefinding programmes to discover these students early enough to prevent their developing full-blown psychoses requiring interruption of their University careers, an event which carries a considerable hazard for the student's future career (Craig, 1972). It is, therefore, important that all professional staff at the UCT-SHS-MHS be made aware of the symptoms of psychotic disorder in order to promote early detection of this potentially extremely debilitating condition. They should, therefore, be able to:

- recognise the varying presentations – especially in the early stages – of this condition amongst a culturally diverse student community. It is highly possible that the predominantly White female UCT-SHS-MHS therapists may not be conversant with culture-specific presentations accompanying the initial presentation of this disorder in historically disadvantaged Black students. Appropriate training in cultural sensitisation and/or the introduction of suitably qualified Black therapists would, hopefully, alleviate this unfortunate situation which may be the direct cause of unnecessary illness and impairment in these already academically vulnerable students.

(i) Sexual disorder

This is the joint third (with substance abuse disorders) most common selected "other" diagnosis documented in students presenting at the UCT-SHS-MHS with the Objective 1 (attendee)-specific finding reporting 10 individual diagnoses and the Objective 3 (usage/utilisation (prevalence) rate per 1 000 students)-specific finding recording a figure of 0,4. The candidate has observed that it would seem self-identity (refer to section 3.1.1), especially in male students, frequently appears to be closely linked to their level of sexual functioning. Therefore, a student suffering from what is often only a minor sexual disorder will consider this condition to be a major threat to his male identity. This situation, not surprisingly, often seems to manifest itself in the subsets of students who are most vulnerable to other psychological or psychiatric complaints – consequently historically disadvantaged Black students appear to be particularly prone to present at the UCT-SHS and/or UCT-SHS-MHS with various sexual disorders. Although not a serious or life-threatening complaint, this condition may be sufficiently severe to impair a student's academic functioning – the impact of this impairment again being potentially most severe for these educationally underprepared Black students. Therefore the UCT-SHS and the UCT-SHS-MHS should:

- train professional staff to appreciate the unstated dynamic that often underlies an often seemingly minor presenting complaint of a sexual nature that seems to be accompanied by a disproportionate degree of emotional distress.

(j) Substance abuse disorder

This is the joint third (with sexual disorder) most common selected "other" diagnosis documented in students presenting at the UCT-SHS-MHS with the Objective 1 (attendee)-specific finding reporting 10 individual diagnoses and the Objective 3 (usage/utilisation (prevalence) rate per 1 000 students)-specific finding recording a figure of 0,4. As both alcohol and drug abuse often tend to run a chronic and relapsing course with considerable functional impairment, the University should:

- provide health education to the student community concerning the dangers of alcohol and drug (substance) abuse.
- consult with residence and other special interest groups.
- train members of residence house committees to intervene appropriately when necessary (Gelman, 1999).

6.4.3 Suggestions for Future Research

> *The possible implications of successful interventions in this critical portion of our population (students) are exceeded in no other group. The establishment of base-line data and of expected frequencies allows comparisons to be made and factors isolated that mat serve to delineate high-risk groups or situations. The identification and further study of such factors allow a rational approach toward (student) community treatment with a principal or primary prevention.*
>
> (Reifler, Liptzin and Fox, 1967: p. 670)

This statement provides a succinct summary of not only the role but also the need for ongoing research into a variety of student mental health issues. The rewards are great, the research that needs to be undertaken can be clearly specified according to the needs and characteristics of the institution concerned and the specific intervention strategies to be adopted can be delineated according to the results of the research conducted.

According to Reifler, Liptzin and Fox (1967), some of the advantages of utilising a college/university community for the purpose of developing a model for the scientific diagnosis and treatment of the community are: (i) its known population; (ii) its relative circumscription geographically, and (iii) the relative homogeneity of successive classes entering into the system. However, with the advent of the transformation process currently affecting UCT whereby an increasing number of historically disadvantaged Black students are being admitted, the latter advantage does not necessary apply to this institution – although, conversely, UCT would provide an excellent model for studying the dynamics of change in a circumscribed community. Consequently relevant University authorities have the duty and opportunity to requisition and relevant academic departments have the duty and opportunity to conduct research concerning aspects of student behaviour that could impact upon their mental health status that could possibly be applied to the benefit of the wider community. In this way, the University will truly be able to serve as a community resource rather than merely as an ivory tower exclusively concerned with esoteric academic pursuits.

6.4.3.1 The need for a screening instrument

A major and important research project that the University could institute would concern the development of a diagnostic screening tool for the identification of students who are predisposed to mental disorders and who might profit from further evaluation and/or therapeutic intervention at the UCT-SHS-MHS. The potential value of such a diagnostic screening tool is underscored by a finding reported in several accounts of programmatic efforts to facilitate adjustment to college/university where students who experienced difficulty in adjustment tended not to respond to or participate in programmes offered to student bodies at large (Baker and Nisenbaum, 1979; Kirshner, 1974; Lindquist and Lowe, 1978). Furthermore, such a screening instrument could be used by, inter alia, faculty officers, Undergraduate Financial Aid Office (UCT-UFAO) staff and UCT-administered residence wardens to identify new "at risk" students with whom they might come into contact so that these students could receive additional support throughout the duration of (especially) their first year of study. This additional support (which could be viewed along the lines of the

academic support that many educationally underprepared students receive through the UCT-ADP) could serve to facilitate the student's successful adjustment to the University. This should reduce the level of anxiety experienced by the student in attempting to meet the often exacting demands of what is frequently perceived to be a totally foreign environment (likewise UCT-ADP courses are intended to reduce the level of academic stress in academically "at risk" students). Mental disorders would, therefore, be far less likely to develop in "at risk" students if they were to receive this additional support rather than being left alone to cope with the vicissitudes of university life. Therefore, in summary, such a screening instrument would enable relevant University authorities to assist an increased number of students to derive maximum benefit and enjoyment from their tertiary educational experience.

6.4.3.2 The need to test theoretical models concerning student presentation at the UCT-SHS-MHS

Further studies could be conducted to test the validity of various theoretical models/ frameworks representing public health, clinical and social psychological approaches to the prediction and understanding of behaviour – especially the Health Belief Model for explaining and predicting the acceptance of health and medical care recommendations (Becker, Drachman and Kirscht, 1977) – within the setting of the University of Cape Town student community (refer to Appendix Xc for further details). It should prove most useful to the University authorities in charge of providing health care facilities to the total student community to understand the various perceptions that are entailed before a student even considers accepting medical care – including attending the UCT-SHS-MHS for evaluation and/or therapeutic intervention for a potentially debilitating psychological or psychiatric complaint that may be the direct consequence of academic stress. These dimensions include: (i) the student's subjective perception of the risk of contracting a mental health disorder; (ii) the student's evaluation of both the medical/clinical consequences and possible social consequences of the mental disorder; (iii) the student's beliefs regarding the effectiveness of the various available University student service-orientated facilities (including the UCT-SHS-MHS) in reducing the threat of the mental disorder; (iv) the student's impression of the potentially negative aspects of a particular health action (such as being seen by his/her peers to be attending the UCT-SHS-MHS) that may act as impediments to undertaking the recommended behaviour (seeking evaluation and/or therapeutic intervention for the underlying mental disorder), and (v) the stimulus that is necessary to trigger the decision in the student to present with his/her mental disorder at the UCT-SHS-MHS – this "cue to action" may include mass media communications instituted by the University authorities in charge of providing health care facilities to the total student community or interpersonal interactions from peers or friends who were satisfied by the treatment they received at the UCT-SHS-MHS. Therefore, in summary, these studies would be able to not only provide detailed findings concerning these five dimensions in health seeking behaviour that should enable relevant University authorities to deliver an appropriate and user-friendly mental health care service but also should be able to produce comprehensive between UCT-SHS-MHS users and non-users (also refer to section 3.2.9).

6.4.3.3 The need to assess the efficacy of the UCT-SHS-MHS

Additional studies, complementing those conducted to test the validity of various theoretical models/frameworks representing public health, clinical and social psychological approaches to the prediction and understanding of behaviour (refer to section 6.4.3.2 above), would gauge the opinion of a representative cross-section of the student community concerning the perceived efficacy of the UCT-SHS-MHS in delivering a service that is not only friendly and professional but is also highly accessible and appropriate to their needs. All suggestions for possible improvements to the current system should be thoroughly evaluated and appropriate changes implemented as a matter of urgency. It would be appropriate to correlate the findings of such a study of student attitudes to the UCT-SHS-MHS with the actual pattern of presentations documented in Objectives 1 and 3 of the UCT-SHS study. It would, consequently, be possible to determine – according to the selected demographic, academic, residential (home address) and financial assistance variables employed in this study – subsets of students who not only perceive the UCT-SHS-MHS to be less than effective in catering to their needs but also, as a direct result of this belief, are underutilisers of this student service-orientated facility. It would be the duty of the University authorities in charge of providing health care facilities to the total student community to implement strategies that would address barriers to presentation at the UCT-SHS-MHS that may affect such students – for example, appropriate health promotion messages (refer to Appendix Xc for the five major components of persuasive communication formulated by McGuire (1974)) would need to be directed at Black students if they felt that the UCT-SHS-MHS did not address their particular health needs. These promotional messages need not only to be appropriately "framed" but also would have to be regarded as credible, trustworthy, knowledgeable and attractive by the target audience as well as being similar to them with respect to their basic beliefs, values and experiences of life (McGuire, 1968). Therefore, in summary, the results of such surveys would provide relevant University authorities with the necessary information to initiate appropriate measures to improve the level of service provided by the UCT-SHS-MHS as well as undertake promotive educational programmes targeted at non-or underusers. Indeed, such periodic service evaluations should be conducted for all student service-orientated facilities in order to make them more user-friendly and relevant to the student community.

6.4.3.4 The need for more formal epidemiological studies of the student community

Yet further studies, complementing those outlined in sections 6.4.3.2 and 6.4.3.3 above, would seek to determine the true incidence or prevalence of mental disorders within the total University of Cape Town student community. It must be noted that the UCT-SHS study is confined to students attending the UCT-SHS-MHS for the evaluation and/or therapeutic intervention of psychological or psychiatric complaints. It does not attempt to measure the incidence or prevalence of mental disorders within the student body of which attendees are but a small part. Structured questionnaires containing validated screening instruments to detect the presence of underlying mental disorders (such as the Self-Reporting Questionnaire (SRQ)-25 employed by Gelman, 1999, in her survey of UCT-SHS attendees) could be distributed to a representative cross-section of the student community who could, in turn, be further characterised according to the selected demographic, academic, residential (home address) and financial assistance variables employed in this study.

These students would not only complete the screening instrument but would also be provided with the opportunity to raise additional unsolicited comments concerning problem-areas within their university experience that they may find stressful. These problem-areas might be found to directly contribute to the presence of the mental disorders documented in those students who scored 8 on the SRQ-25. It would, therefore, be possible not only to assess whether certain subsets of students were more likely to develop mental disorders than others but also, as in the case of section 6.4.3.3 above, to correlate these findings to UCT-SHS-MHS presentations documented in Objectives 1 and 3 of this study. This would enable the identification of student subsets who were, on the one hand, prone to mental disorders (as detected by an SRQ 8) but who were, on the other hand, not attending the UCT-SHS-MHS for evaluation and/or therapeutic intervention. This, in turn, could lead to further follow-up studies to assess possible reasons for the underutilisation of this facility by selected groups of students. (Comments previously raised in section 6.4.3.2 regarding the testing of theoretical models concerning student presentation and section 6.4.3.3 assessing the opinion of students concerning the perceived efficacy of the UCT-SHS-MHS are also extremely relevant here). Therefore, in summary, such formal epidemiological studies would be able to provide relevant University authorities with data regarding both the magnitude and, to a lesser degree, the nature of mental disorders affecting various subsets of students as well as remedial measures and targeted preventive interventive programmes that could be instituted to reduce the impact of these disorders on vulnerable sectors of the student body.

6.4.3.5 The need for a longitudinal study

The UCT-SHS study is a (retrospective) case-control study (Objective 2 – patients versus controls) as well as a (retrospective) cross-sectional study (Objective 3 – patients versus the total student community) rather than a longitudinal (prospective) one. Prospective studies appear to be rarely reported in the college/university mental health services research literature – the candidate found only a single such study from a developed (first world) country which records a fairly comprehensive set of demographic and academic (year of study)-specific results (Rimmer, Halikas and Schuckit, 1982) although Baker (1964) and Reinhold (1973), in comparing users and non-users of the University of Pennsylvania Counseling Service and Psychiatric Clinic (refer to section 3.2.9.5 for further details), also employ this methodology to produce less comprehensive demographic and academic results. Although case-control and cross-sectional methods are appropriate to address the objectives of this study, additional information relating, inter alia, to student academic and financial adjustment to the University (also refer to Gelman, 1999), various background social circumstances (such as the development of relationship and family problems) and selected risk-taking behaviours (such as alcohol and drug abuse as well as eating disorders) could be optimally investigated through the use of longitudinal (prospective) studies. Changes in these indicators/ behavioural patterns could be assessed during the course of the student's university career and/or following the introduction of suitable preventive interventive programmes. Furthermore, it would be possible to investigate for the presence of any relationships that may exist between these different indicators/behavioural patterns relating to either the student body in general or specific subsets within the total student community (Flisher, 1996; Robins and Rutter, 1990; Yach and Botha, 1987a). Therefore, in summary, longitudinal studies provide the researcher

with a better opportunity than retrospective studies for establishing the presence and/or nature of causal relationships that may exist between the stated outcome and the variables/risk-taking behaviours under investigation.

6.4.3.6 The need for qualitative data

It would be extremely useful to obtain first-hand accounts from either individual students or focus groups concerning their opinions and experiences of aspects of University life that may negatively impact upon their academic or financial adjustment to UCT. These problem areas may even serve to impair their functional ability and compromise their mental well-being. Therefore any suggestions that these students may propose for improvements to the currently existing system should prove invaluable to relevant University authorities that are responsible for the design and implementation of preventive interventive programmes – without such input these programmes would be far less likely to succeed. Several qualitative studies investigating aspects of student life or their adjustment to the University of CapeTown have been performed and quoted in this study (Honikman, 1982 detailing processes and problems affecting first year students; Leon, 1987, documenting the integration of Black students within the University, and Mukoma, 1999, assessing the role of the University in promoting the well-being of its student body). However, Flisher (1996) cautions that, as qualitative studies inevitably involve small groups of individuals, caution is required in generalising findings to the population from which the small study group was drawn. It is thus necessary to proceed to nomothetic epidemiological studies to determine the extent to which the findings generated from the qualitative studies apply to UCT students in general. The results produced by these epidemiological studies may, in turn, require explanation and qualitative studies would again be indicated. Thus, the author concludes, an interactive cycle is established in which quantitative and qualitative investigations complement and inform each other. Therefore, in summary, qualitative results enable the researcher to understand more fully the findings obtained from quantitative studies. In the context of the UCT-SHS study, it would be possible to investigate, for example, the reason why female students are more likely to present with mental disorders at the UCT-SHS-MHS than their male peers – whether they are, inter alia, either less afraid to attend this student service-orientated facility or, alternatively, more likely to be advised to seek evaluation and/or therapeutic intervention for their psychological or psychiatric complaints.

6.4.3.7 The need for more Southern African college/university mental health services data

The UCT-SHS study is, by definition, restricted to students (principally UCT-SHS-MHS attendees) attending the University of Cape Town. There are several articles referring to studies conducted amongst attendees of the University of the Western Cape (UWC) Centre for Student Counselling (e.g. Naidoo, 1995; Nicholas, 1995 and 1997) which provide valuable knowledge regarding, especially, the concerns of local students. Otherwise there appears to be a dearth of research-related material originating from other Southern African tertiary educational institutions. It is noteworthy that both this study and those of Naidoo and Nicholas at the UWC have been conducted in Cape Town. It is, therefore, not possible to know how

generalisable these results are to other regions in the country and other countries in the sub-continent as they are large differences between the regions of South Africa in terms of demographic profile, culture, urbanisation status and economic base (Human Sciences Research Council, 1994). Therefore, it would be necessary to exercise caution in assuming that the results obtained from the Cape Peninsula will also be valid for other regions in South Africa (Flisher, 1996). Furthermore, the student body of the University of Cape Town is particularly cosmopolitan insofar as over 40 per cent of its members live outside metropolitan Cape Town (refer to section 5.1.4 and Appendix VId, Appendix VIe and Appendix VIf for residence (home address)-specific results for the total student community (n_3)). This finding could also possibly affect the generalisability of these results although it might, at least partially, reflect the characteristics of the other regions of the country and the sub-continent.

(Also refer to sections 6.4.1 and 6.4.2 above, for details of further research that could be conducted by the various student service-orientated facilities outlined in these subsections and Appendix XI for details of objectives and results discarded from the UCT-SHS study.)

6.4.4 Future Possible Developments

> *The committee's intention is that the university should be more selective at undergraduate entry with the emphasis on admitting the best students ... One thing UCT will not do is lower standards to make entry to the university and the securing of a degree and other qualifications easier. To do so would be unfair to the community, to the university which has an enviable international reputation, and to the students themselves.*
>
> (UCT News, September 1982: p. 3, quoted by Honikman, 1982: p. 266)

This statement by the Academic Planning Committee unequivocally proclaims the University of Cape Town's viewpoint concerning the maintenance of academic standards within the institution. The safeguarding of academic standards – which should always be a major concern to relevant University authorities – was accomplished in the early 1980s (as implicitly implied in the above quotation) by rigidly maintaining the status quo with respect to their student admissions policy. However, nearly two decades later, UCT currently finds itself positioned within not only a new political dispensation but also a totally transformed society. Consequently, it must now face a new set of challenges which revolve around measures that it must adopt in order to remain relevant to the needs of the community that it purports to serve without compromising its academic standards. Several new developments have arisen within the tertiary education system that are aimed at redressing past imbalances that precluded potentially talented but educationally underprepared students from enrolling for a higher education. The University has instituted several measured amongst historically disadvantaged students to alleviate the effects of these inequalities in South Africa's education system – the most notable being the Academic Development Programme (UCT-ADP) (refer to section 6.4.1.3 and Appendix IXc for further details).

There is current ongoing public debate (circa January 2000) concerning a further proposed measure to redress past imbalances which involves the reduced entrance requirement introduced by the University of the Western Cape (UWC), which no longer requires prospective students to obtain a matric endorsement (previously a matric exemption). According to the leading proponents of this strategy (e.g. Ogunniyi, 2000; Vale, 2000), this step will permit talented students to attend UWC who might otherwise have been excluded from registering on academic grounds. It is possible that, some time in the future, the University of Cape Town may decide to adopt the same reduced entrance requirements for prospective students coming from an educationally disadvantaged background. It is not the intention of the candidate to embark upon a debate concerning the merits or shortcomings of such a decision – however, it is clear that this step could, if not optimally managed, lead to the development of a host of mental disorders in many of the students admitted to the University under these circumstances. Therefore the UCT-SHS-MHS and the other student service-orientated facilities outlined in this section must be aware of the potential pitfalls that could affect these students. It would be the duty of these departments to assist them to make as smooth a transition to their new environment as possible so that they are able to convert their undoubted potential into a successful academic career. This task would contribute immeasurably to the advancement of the transformation process.

6.4.5 Concluding Comments

The recommendations documented in this section entail the two important and interlinked principles of health promotion and community participation.

6.4.5.1 Health promotion

> *To reach a state of complete physical, mental and social wellbeing, an individual or group must be able to identify and realise aspirations, to satisfy needs, and to change or cope with the environment.*
>
> (WHO et al., 1986, quoted from Mukoma, 1999: p. 8)

It is noteworthy that this definition is clearly related to that of health appearing in section 2.1.1.1 insofar as health promotion represents the means for ensuring the delivery of health. It is therefore imperative that the University provides academic, social, curative and preventive services that actively promote student well-being.

6.4.5.2 Community participation

> *The creation of opportunities to enable all members of a community and the larger society to actively contribute to and influence the development process and to share equitably in the fruits of development.*
>
> (United Nations, 1981: p. 5, quoted from Midgley et al., 1986: p. 24)

This topic is discussed in greater depth in section 2.1.2.1 which addresses community participation as one of the five component principles involved in the delivery of primary health care. This raises the possibility of increased student participation in the planning, organisation, operation and control of the UCT-SHS via their elected Student Representative Council (UCT-SRC). It is therefore important that the University, in addition to providing academic, social, curative and preventive services that actively promote student well-being (refer above), actively encourage students to become involved in the development and/or management of service-orientated facilities. This could be achieved through the creation of appropriate committees to liaise between University authorities and the elected representatives of the student body.

6.5 CONCLUDING COMMENTS

6.5.1 From Registration to Graduation: a pictorial perspective

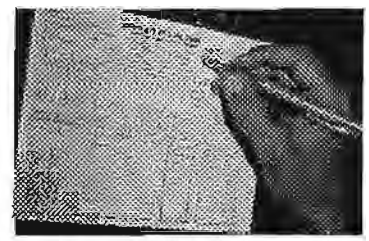
This subsection provides a pictorial overview of some of the highlights in the careers of students attending the University of Cape Town. This material is designed to complement that previously appearing in the main body of this research work. The first subheading concerns the (prospective) student's initial contact with the University. Some students may have little or no knowledge of either the organisational structure or the geographical layout of the University when they complete their registration forms. On the other hand, some of their peers may have been fortunate enough to attend various school outreach programmes sponsored by the University which would assist learners (scholars) to make informed decisions concerning their choice of degree/diploma courses. Such programmes should assist new students in their adjustment to a strange and often threatening environment. The second subheading highlights some of the clubs, societies and extra-curricular activities that are available to the new student. These bodies – which actively compete against each other for student membership – can be, inter alia, service-orientated (e.g. SAX APPEAL magazine which is affiliated to SHAWCO – the Students' Health and Welfare Centres Organisation), cultural (e.g. the University of Cape Town choir) or religious (e.g. the Muslim Students Association). Membership of one or more of these clubs or societies may assist students in their adjustment to the University by promoting a sense of belonging through active participation in the proceedings of an officially sanctioned body. The third, fourth and fifth subheadings document avenues of academic instruction that take place within the University. These include formal lectures, tutorials and practicals (often involving the use of computer-based skills acquired on systems housed in the University's computer laboratories) as well as other occasions when tutors and lecturers communicate informally with their students. These informal sessions, which frequently take place outside the confines of the classroom, often provide students with an extremely useful opportunity to discuss their problems – both academic and non-academic – in an open and non-threatening manner. The advice received from these exchanges might help to dramatically reduce stress levels in anxious and confused students. This positive intervention could serve to prevent the development of mental disorders which ultimately require evaluation and/or therapeutic intervention at the UCT-SHS-MHS. Further intensive tuition in the form of academic enrichment is provided by the Academic Development Programme (UCT-ADP) to educationally underprepared students in an attempt to redress inequalities in the education system. This department fulfils a vital function insofar as it reduces the level of academic-related stress affecting these

students who might otherwise have been left to endure a most traumatic adjustment to the often exacting academic demands of the University. The sixth and seventh subheadings illustrate some of the hard work and dedication that is necessary for academic success. It is important that students must work consistently throughout the academic year in order to avoid excessive stress at or near examination time. It is also essential that students must find time between studying to engage in recreational activities as excessive preoccupation in academic matters may also promote the development of psychological or psychiatric complaints. The eighth and ninth subheadings demonstrate some of the means by which students are able to relax between pursuing their academic activities. These include sporting activities (e.g. basketball), social activism – insofar as the University openly encourages freedom of thought and the development of a social conscience amongst its students or merely taking time to commune with fellow students. The University offers an environment that promotes social interaction between students insofar as several of the faculty buildings are characterised by spacious and well-appointed common areas (e.g. the Leslie Social Science building). In addition Upper Campus is characterised by several spacious flights of steps (e.g. the famous Jammie Steps) which permit students to relax or study in the open air. This relaxation and social interaction between academic-related activities is essential for the student's mental well-being. The tenth subheading raises the major challenge confronting the majority of students attending the University – the mid-year and end-of-year examinations which determine whether the student will progress from one academic year of study to the next and, ultimately, successfully complete the degree or diploma for which he/she is registered. This process of evaluation can prove extremely stressful for the average student – it is the candidate's personal observation that it is not unusual for students to require emergency treatment at the UCT-SHS-MHS during the course of these examinations. The eleventh subheading completes this pictorial overview with the graduation ceremony which marks the student's successful completion of the degree or diploma for which he/she is registered. The pursuit of a tertiary education is often an arduous and demanding process which may be accompanied by a wide range of emotional upheavals which, if left unchecked, may develop into frank mental disorders. The UCT-SHS-MHS serves to assist students in overcoming such problems in order to successfully pursue and complete their academic careers.

6.5.1.1 Registration – including pre-registration University-sponsored school outreach programmes

Figure 6.12 High school learners (scholars) attending an exhibition highlighting tertiary educational opportunities available at the University of Cape Town.

Figure 6.13 A prospective student completing his University of Cape Town registration form.



Also refer to section 6.4.1.1(a)(iii) for details of potential programmes that could be implemented by the Student Development and Services Department (UCT-SDSD).

6.5.1.2 Orientation Week – including clubs and societies available to students

Figure 6.14 Student societies and clubs – the display of the annual student publication SAX APPEAL.

Figure 6.15 Student societies and clubs – the display of the award-winning University of Cape Town student choir.

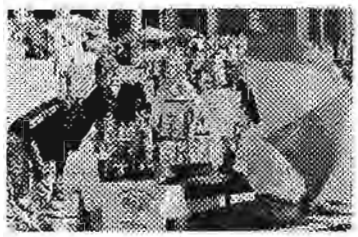


Figure 6.16 Student societies and clubs – the display of the Muslim Students Association.

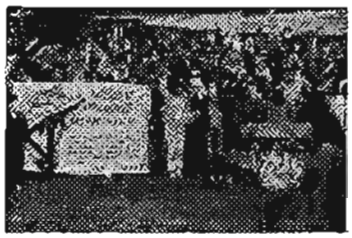


Figure 6.17 A panoramic view of the University plaza and Jameson Hall during Orientation Week.

Also refer to the quotation by Honikman (1982) in section 3.1.3 which states that belonging to societies provides the friendships and human interactions that are necessary for the social and emotional well-being of the student.

6.5.1.3 Academic activities– including informal tuition and formal lectures

Figure 6.18 Tutor and student exchanging ideas outside the classroom in University Avenue.

Figure 6.19 Students attending a formal lecture in one of the University's well-appointed lecture theatres.

Also refer to section 3.1.2 for an overview of the college/university which is described, inter alia, as a place where teaching is conducted, learning is engaged in, knowledge is forged and ideas contested (Naidoo, 1997).

6.5.1.4 Practical work– including computer-based training

Figure 6.20 A student acquires new computer skills under the watchful eye of her tutor.

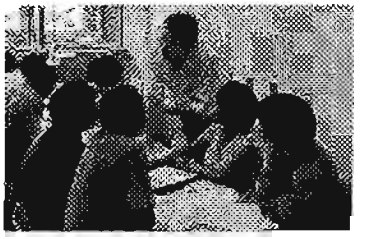
Figure 6.21 A group of students perfect their computer skills by undertaking a practical assignment in one of the University's computer laboratories.

Also refer to section 3.3.4.2(a)(ii) which is based on the premise that the transition of the student from novice to skilled professional, scholar or performer is a demanding process, which can often lead to potentially serious adjustment problems.

6.5.1.5 University of Cape Town Academic Development Programme (UCT-ADP)

Figure 6.22 An educationally underprepared student receives one-on-one tuition from a UCT-ADP tutor.

Figure 6.23 A group of educationally underprepared students receive academic support from a UCT-ADP tutor.



Also refer to section 3.1.3.1(b)(v), section 6.4.1.3 and Appendix IX(c)(i) for further details of Academic Development/Support Programmes (including the UCT-ADP).

6.5.1.6 Studying in groups for academic success

Figure 6.24 A small group of students participating in an animated academic debate.

Figure 6.25 A group of students studying quietly in a departmental conference room.

Also refer to section 3.3.2.2(c)(ii) for a definition and measurement of perceived academic stress (Ragheb and McKinney, 1993) which is often the consequence of academic problems.

6.5.1.7 Studying alone for academic success

Figure 6.26 A student prepares alone to face the challenge of successfully completing a tertiary education.

Figure 6.27 A student studies alone in his University-administered residence room.

Also refer to section 3.3.2.2(e)(ii) for details of "Brain Fag" syndrome (e.g. Prince, 1960 and 1962) which can severely inhibit a student's capacity to study.

6.5.1.8 Extracurricular activities – including sport and social activism

Figure 6.28 A student taking a break from his studies by practising his basketball skills.

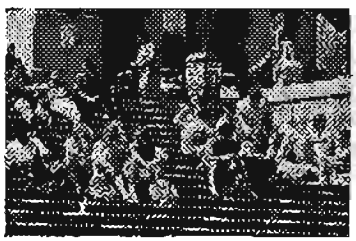
Figure 6.29 A group of students taking part in a political protest meeting.

Also refer to section 3.1.2.1 which notes that the goals/functions of a college/university include, inter alia, providing an environment that stimulates and nurtures change in the personal characteristics as well as in the social or topical attitudes of students (Yue, 1989).

6.5.1.9 Relaxation and reflection on campus

Figure 6.30 A group of students relaxing between lectures inside the Leslie Social Science Building.

Figure 6.31 A group of students enjoying the outdoors by aggregating on one of many flights of steps characterising Upper Campus.



Also refer to the quotation by Griffin (1991) in section 3.1.3.3(b) which states that the student who is more integrated, or involved, in the social life of the college/university (institution) will grow in a number of ways.

6.5.1.10 Mid-year and end-of-year examinations– the final hurdle to overcome

Figure 6.32 Students concentrating on the often stressful experience of meeting the academic requirements of the University.

Figure 6.33 Students writing examinations inside the University of Cape Town Sports Centre.

Also refer to section 3.3.2.2(d)(ii) for details of the three principal ways in which cases of examination anxiety present in students (Malleson, 1957).

6.5.1.11 Graduation– the reward for a successful academic career

Figure 6.34 A student marks the successful completion of his degree by graduating in Jameson Hall.

Figure 6.35 A group of new graduates leaving Jameson Hall.

Also refer to Figure 6.11 for a schematic diagram illustrating, inter alia, the potential importance of the UCT-SHS-MHS on the graduation status of (especially) historically disadvantaged Black students.

6.5.2 Final Remarks

The university community is a dynamic organism whose properties are in constant motion and change. This activity is directed and integrated to absorb new and diverse parts. Students are the major elements of this dynamic organism and their enormous momentum and expansion potential are important sources of energy and attention. The successful interaction between these major elements and the other properties of the organism is vital for homeostasis and growth.

This picture of the university community helps to illustrate the area of concern for college mental health services, namely the students: their process of entering the university, their growth while part of the university, and their exit from the university – all within an interactional process. Effective college mental health services need to maintain an awareness of this process.

(Hersch, Nazario and Backus, 1983; p. 247)

This statement eloquently summarises the major background factors relating to the conduct of the UCT-SHS study – viz. the student (refer to section 3.1.1 for further details), the college/university (refer to section 3.1.2 for further details) and student adjustment to the college/university (refer to section 3.1.3 for further details). It is extremely important, as the authors specifically remark, that, in order to be truly effective, college/university mental health services need to be constantly aware of the complex interrelationship that exists between the student and the college/university. Any problem that may arise during the often tortuous course of this relationship may result in the student's mental well-being being sufficiently impaired for him/her to develop a mental disorder that would require evaluation and/or therapeutic intervention at the mental health service.

In order to improve the level of student well-being and thereby reduce the prevalence of mental disorders within the total UCT student community, the Specific Recommendations (refer to section 6.4 for further details) have proposed a wide-ranging series of remedial measures that could be implemented by University authorities attached to the student service-orientated departments. These preventive interventive programmes and administrative strategies have been formulated in an attempt to minimise the emotional distress and functional impairment that may develop in students as a direct consequence of their interaction with the University. Special importance has been devoted to historically disadvantaged Black students who generally derive from a cultural background that is diametrically opposed to the Eurocentric culture of the University.

> *Finally, just as adolescence (studentry) is a transitional phase in the development of an individual, so South Africa is at a transitional phase in its development as a nation. For both for an individual and a nation, interventions made in a transitional phase are likely to have far-reaching consequences. By responding promptly and comprehensively to the health needs of South African adolescents (students), an opportunity would be exploited to address many of the youth, health, and urbanisation priorities that are implicit in the Reconstruction and Development Programme (or any other government-inspired programme for national development) (Carolus, 1994).*
>
> (Flisher, 1996: p. 469)

The role of the UCT-SHS-MHS in contributing to the development of the country has been previously documented in the Specific Recommendations (refer to Figure 6.11 in section 6.4.2.1(b) for further details) and will thus not be further highlighted here. Nevertheless, the importance of the contribution of suitably qualified university graduates to the upliftment of the country and its disadvantaged people should not be underestimated.

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APPENDICES

There are twelve separate appendices. Appendix I documents prominent University staff members (both academic and administrative) and non-governmental organisations (NGOs) that expressed interest and support for this research and includes scanned copies of four of the letters of endorsement received. Appendix I, therefore, demonstrates that there is a widely perceived need, especially amongst University authorities, for this nature of research – this section should be viewed in conjunction with section 1.3 which outlines the rationale for conducting this research. Appendix II outlines a series of brief summaries of patient-specific samples detailed in articles appearing in the Literature Review for college/university mental health services in developed (first world) and developing (third world) countries. Appendix II, therefore, not only contextualises the individual studies reported in the respective subsections/subheadings of the Literature Review by highlighting their main findings, but also contains details that, for reasons of continuity, may not have been included in the main body of the text. Appendix III contains replicas of the "Patients Stat Details sheet" and the Diagnostic coding system (modified from DSM IIIR) employed by the UCT-SHS-MHS for the purpose of data collection and classification. Appendix III, therefore, displays the format of the raw data obtained from professional staff (psychologists, psychiatrist and medical officers) that was collected, collated and analysed to form the results detailed in Chapter 5. Appendix IV describes geographic techniques used to construct the Postal Code Groupings (PCGs) within metropolitan Cape Town employed in the residence (home address) -specific variable. Appendix IV, therefore, highlights these technical details so that the metropolitan Cape Town-specific results described in Chapter 5 can be compared to other studies that have used similar geographic techniques (viz. Rip, Keen and Kibel, 1986). Appendix V provides detailed definitions obtained from the DSM III (Diagnostic and Statistical Manual of mental disorders, Third Edition – American Psychiatric Association, 1980) for individual psychological or psychiatric complaints listed in the Diagnostic coding system employed by the UCT-SHS-MHS. Appendix V, therefore, provides additional background clinical information concerning the nature of mental disorders presenting in students at the UCT-SHS-MHS. Appendix VI reports additional Objective 2 and Objective 3-specific data for the non-abridged format of the demographic variable of age, the academic variables of level of study and year of study, the residential (home address) variable of PCGs outside metropolitan Cape Town but within the WCHR, PCGs outside metropolitan Cape Town and outside the WCHR but within South Africa and African and non-African countries outside South Africa and the financial assistance variable. Appendix VI, therefore, supplies relevant control and total student community-specific data that has not been included in Chapter 5 where odds ratios have not been calculated for the non-abridged format. Appendix VII details a comprehensive objective-specific summary of both patient-specific and clinical/diagnostic-specific intervariable results as well as a composite patient-specific interobjective and intervariable summary of results. Appendix VII, therefore, provides an intermediate link between the comprehensive results detailed in sections 5.1.1 to 5.1.5 and the concise patient-specific profiles that are outlined in section 5.1.6.

Appendix VIII tabulates logistic regression analyses performed upon the diagnoses recorded by psychologists, psychiatrist and, where appropriate, medical officers for students presenting at the UCT-SHS-MHS from 1991 to 1993. These diagnoses are presented in the form of the major diagnostic categories (Appendix VIIIa) and individual V-codes (Appendix VIIIb) affecting student attendees who are characterised according to the selected demographic, academic, residential (home address) and financial assistance variables previously detailed in section 5.1. (Appendix VIIIc is a summary of the maximum likelihood ratios recorded by the individual models detailed in Appendices VIIIa and VIIIb.) Brief commentary is provided concerning variables that report an altered level of statistical significance (either newly statistically significant or no longer statistically significant) to those previously recorded for the patient-specific data for UCT-SHS-MHS attendees (refer to section 5.2 for further details). Therefore, Appendix VIII demonstrates variable-specific differences that are noted between overall students attending the UCT-SHS-MHS (corresponding to the patient-specific data) and those subsets of students presenting at this student-service orientated facility with selected individual diagnoses (corresponding to the clinical/diagnostic-specific data). The most important of these findings are highlighted in sections 5.2.2 and 5.2.3 and discussed further in section 6.2.7. Appendix IX serves to outline student service-orientated departments (including the UCT Student Development and Services Department, the UCT Student Advice and Development Centre, the UCT Undergraduate Financial Aid Office, the UCT Student Housing Office and the UCT Academic Development Programme) relevant to the UCT-SHS study. Appendix IX, therefore, by quoting relevant extracts from a variety of official University of Cape Town information sheets, furnishes details concerning background information, function, structure, organisational structure and staffing of these departments which are all potential beneficiaries of this study. Appendix X functions to briefly outline various background management, psychological and sociological considerations that are relevant to the specific recommendations documented in section 6.4. These include health management and planning concepts that relate to University authorities, prevention of mental illness which relates to the actual preventive strategy/ies to be implemented and the complex but highly relevant material overviewing the principles of behavioural modification. Appendix X, therefore, highlights the multitude of factors that may influence not only management-related decision-making by relevant University authorities responsible for the implementation of various preventive interventive strategies to reduce the prevalence of mental disorders in the total student community but also the willingness of the individual student to accept the preventive interventive strategy that is being provided by the aforementioned University authorities. Appendix XI documents objectives that were initially included in the specific objectives of the UCT-SHS study which the candidate was subsequently obliged to discard due to various methodological constraints that adversely affected either the collection, collation or analysis of the data required in order to fulfil them. These objectives relate to the possible relationship between Student Advice and Development Centre (UCT-SADC) and UCT-SHS-MHS attendees, the influence (if any) of the UCT-SHS-MHS on the academic performance of attendees and additional social and familial details relating to students presenting at the UCT-SHS-MHS. Appendix XI also details results that were initially included in Chapter 5 of the UCT-SHS study which the candidate was subsequently obliged to exclude due to methodological considerations relating largely to their suitability for inclusion with the existing results. These results relate, inter alia, to

the epidemiological concepts of attributable risk and attributable fraction as well as the mean number of diagnoses per patient and year- and month-specific UCT-SHS-MHS attendance trends. Appendix XI, therefore, highlights additional material that could (should) have been included in the UCT-SHS study in order to further increase both its scope and its utility to relevant University authorities. However, various methodological constraints that have been outlined here prevented the inclusion of this material in this study. Appendix XII consists of a series of three schematic diagrams that demonstrate the interrelationship that exists between the UCT-SHS, the student community and mental disorders presenting at the UCT-SHS-MHS. They review various demographic, academic, residential (home address) and financial assistance determinants that potentially impact upon student mental health thereby leading to psychological or psychiatric complaints presenting at the UCT-SHS-MHS. Appendix XII, therefore, completes this research work by providing a summary of background factors that are relevant to the conduct of the UCT-SHS study.

APPENDIX I

Letters of endorsement for UCT-SHS study

(a) List of interested parties

(b) Dr M.A. Ramphele

(c) Mr F. Molteno

(d) Professor T. Zabow

(e) Professor J.D. Baqwa

APPENDIX Ia

1. List of prominent University staff members (both academic and administrative) who have expressed interest in and support for this research:

(a) Executive Management

*Dr M.A. Ramphele – Vice Chancellor

Prof. W. Gevers – Senior Deputy Vice-Chancellor

Prof. M.E. West – Deputy Vice-Chancellor and Chair: Student Health Committee

(b) Senior Management

Mr H.T. Amoore – Registrar

Dr N. Mathabe – Dean of Students

*Mr D.F. Molteno – Equal Opportunity Officer

Mr B.N. Roberts – Former Deputy Registrar: Student Affairs Department

(c) Inter-Faculty Academic Department Heads

Prof. J.H.F. Meyer – Former Director: Teaching Methods Unit (TMU)

Prof. I.R. Scott – Director: Academic Support Programme (ASP)

(d) Academic Department Heads

*Prof. J.D. Baqwa – Head: Department of Primary Health Care

Prof. S.R. Benatar – Head: Department of Medicine

Prof. A.R.L. Dawes – Former Head: Department of Psychology

Prof. L.S. Gillis – Emeritus Professor (Former Head): Department of Psychiatry and advisor-supervisor

Dr M.A.T. Tshabalala – Former Director: School of Social Work and Warden of Liesbeeck Gardens Residence

*Prof. T. Zabow – Acting Head: Department of Psychiatry

(e) Student Organisation

Mr M. Fuzani – Previous President: Student Representative Council (SRC)

2. List of Non-Governmental Organisations (NGOs) who have expressed interest in and support for this research:

Institute for Democracy in South Africa
Justice in Transition in South Africa
South African Medical Association (SAMA)
[Formerly: Medical Association of South Africa (MASA)]
South African Institute for Race Relations
The Desmond Tutu Educational Trust
The Open Society Foundation for South Africa

*copies of letters of endorsement are included in Appendices IB–IE.

APPENDIX Ib

Figure A.1 Letter of endorsement from Dr M.A. Ramphele (former Deputy Vice-Chancellor and current Vice-Chancellor: University of Cape Town).

UNIVERSITY OF CAPE TOWN

Office of the Deputy Vice-Chancellor

University of Cape Town · Private Bag · Rondebosch 7700 · South Africa
Telephone (021) 650-4002/3
Telefax: (021) 650-2138
Telex: 5-27208 UCTAD SA
Telegrams: Alumni Cape Town

28 October 1993

Dr Jeremy De Beer
Student Health Service
UCT

Dear Jeremy

I am very interested in the research you have been doing, and intend extending. It will give us valuable information. I have passed on your documents to our EORP and will be in touch with you as soon as possible.

Yours sincerely

DR MAMPHELA RAMPHELE
DEPUTY VICE-CHANCELLOR

APPENDIX Ic

Figure A.2 Letter of endorsement from Mr F. Molteno (Equal Opportunity Officer: University of Cape Town).

UNIVERSITY OF CAPE TOWN

Equal Opportunity Officer

Administrative Offices
Postal Address: University of Cape Town · Private Bag Rondebosch 7700
Telephone (021) 650-2112/3 Telegram Alumni Cape Town
Telex 5-22208 · Fax No: (021) 650-2138
Email: premner/oesfm
internet: oesfm@bremner.uct.ac.za

11 December 1995

REF: S\JDB1SHS

Dr Jeremy de Beer
Sessional Medical Officer
Student Health Service
University of Cape Town

Dear Dr de Beer

UCT-SHS Student Mental (Health) Disturbances/Disorders Study

Thank you for informing me as to your progress with the above study.

I believe that you are embarked on an important piece of research which promises to shed light on an area of serious concern about which we currently have only impressionistic information.

As we strive to create conditions at the University, which afford real and substantive equality of opportunity to all students (and staff) irrespective of race, gender and other extraneous factors, research such as your own has a potentially very valuable contribution to make. Without solid data and accurate understanding of how the University environment is experienced by, and differentially affects, people from diverse backgrounds, we can rely only on gut feelings and luck to make progress towards our goal.

I hope that you will find yourself positioned to complete the study as soon as possible. I look forward to your findings.

Yours sincerely

Frank Molteno
EQUAL OPPORTUNITY OFFICER

APPENDIX Id

Figure A.3 Letter of endorsement from Prof. T. Zabow (Associate Professor: University of Cape Town Department of Psychiatry).

UNIVERSITY OF CAPE TOWN

Department of Psychiatry

Groote Schuur Hospital
Observatory · 7925
South Africa
Telephone: 47-5450/404-2164
Fax No: (021) 406-6499
Professor and Head of Department: **B.A. Robertson**
Vera Grover Professor of Mental Handicap: **C.D. Mettena**

TZ:cv 17 October 1994

TO WHOM IT MAY CONCERN

re: ***PROPOSED RESEARCH – DR. S. DE BEER – MENTAL HEALTH DISTURBANCE IN STUDENTS***

The abovenamed has commenced a study of the mental health disturbances prevalent in university students.

He has embarked on this important work under the supervision of Emeritis Professor L.S. Gillis of this department. His assessment and presentation to this department indicate an important area of research worthy of encouragement. The emotional and mental health disturbances of the student population have not been previously evaluated. Studies of medical students reveal important intervention strategies to prevent morbidity in professional life later.

This department has previously studied scholars in the adolescent age group with significant and useful findings.

I would like to support this researcher in his application for assistance in this important and valuable project.

PROFESSOR T. ZABOW
Deputy Head of Department

APPENDIX Ie

Figure A.4 Letter of endorsement from Prof. D. Baqwa (Head: University of Cape Town Department of Primary Health Care).

UNIVERSITY OF CAPE TOWN

Unit of Family Practice/Primary Care

Department of Medicine
Medical School · Observatory 7925 · Cape · South Africa
Telephone 406-6197
Fax No: (021) 448-6815

28 June 1995

Dr I P de Beer
8 Merin Avenue
NEWLANDS 7700

Dear Dr de Beer,

I acknowledge your letter of 21 May 1995 and other correspondence that has come through to my office.

Let me begin by expressing the immense interest that I have in the work that you are doing. I would rather elaborate on this at a meeting which I propose that we should hold. In that meeting, we should explore options and possibilities regarding collaboration and what the Department can do concerning the project.

I have received a warm welcome and incredible interest and support from circles within the Faculty and beyond. Whereas this is good, it also carries the uncomfortable spin-off that one never has time to attend to all the important issues that arise. I am actually appealing for your indulgence, seeing that it has not been possible to give your project prompt and adequate attention.

My Secretary (Mrs Cherien Armstrong) will arrange a suitable date for a meeting if you can find time to give her a call.

Best wishes,

Yours sincerely,

Professor Dumo Baqwa

JDB/cas
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APPENDIX II

Catalogue-type summary of patient-specific samples obtained from college/university mental health services in developed (first world) and developing (third world) countries – additional material to complement Tables 3.1 to 3.15 and accompanying commentary appearing in section 3.3.

(a) Developed (first world) countries

(b) Developing (third world) countries

APPENDIX IIa

Developed (first world) countries

(i) Alston (1974)

Alston (1974), in a retrospective study of minority (mainly Black and Hispanic) students attending the Mental Health Section of the University Health Service at New York University from September 1969 to June 1970, notes a tendency of minority students to emphasise situation and cultural factors in initial presentations at the Service. Frequent feelings of alienation, identity diffusion, aimlessness in career choice and self-inadequacy presented by the minority student can be quite easily displaced onto the many situational problems they do indeed face or the very real cultural bias against them. The author interprets this nature of presentation as an attempt by minority students to cope with a sense of ambivalence – a situation which did not seem to create a barrier to more insightful discussion of their problems. This finding seems to confirm the general assumption that minority students' expectations, academic preparation, sociopsychological outlook and need for counselling differed from that of the average White student.

(ii) Braaten and Darling (1961)

Braaten and Darling (1961), in a retrospective study of students attending the Mental Health Division at Cornell University from July 1959 to June 1960, note that there is, in general, a very significant positive relationship between gender and type of psychopathology as measured by the MMPI (Minnesota Multiphasic Personality Inventory) administered to 63,7 per cent of attendees. The author reports that female attendees tended to display more hysteria and more psychopathic deviation than men and also appear to be more paranoid. On the other hand, male students are slightly overrepresented in relation to depression, psychasthenia and schizophrenia than females and were also more significantly involved with problems of sexual identification.

(iii) Buckle (1972)

Buckle (1972), in a retrospective study of students attending the Department of Psychological Medicine at Monash University, during an unspecified three year study period, notes that minor emotional illness is greatly under-represented in their sample because these cases are usually dealt with by the University physicians or counsellors.

(iv) Carmen, Zerman and Blaine (1968)

Carmen, Zerman and Blaine (1968), in a retrospective study of athlete students attending the Psychiatric Service at the Harvard University Health Services, from September 1957 to June 1962, report that athletes used the facilities of the service less frequently than non-athletes. Sophomore (second year) athletes attended in greater proportion than sophomore non-athletes, which suggests the hypothesis that increased competition for university awards was an added stress. In addition, athletes who came for treatment tended to present with a greater number of problems than non-athletes. These problems were spread over a broad range and were significantly fewer than those of non-athletes only in the area of socialisation.

(v) Craig (1974)

Craig (1974), in a retrospective study of students attending the Student Mental Health Service of an anonymous Arts College in Baltimore, Maryland, during a one year study period from 1970 to 1971, notes that a relatively high proportion of students who experience psychotic episodes (e.g. schizophrenia) may go unrecognised by the student mental health service until their emotional distress causes them to drop out of the academic system entirely. If this is true, student mental health services must develop much more intensive case-finding programmes if they are to discover these students early enough to prevent their developing full-blown psychoses requiring interruption of their university careers.

(vi) Dann (1964)

Dann (1964), in a (?) retrospective study (not clearly indicated in article) of students entering the University College, Swansea, in 1958, 1959 and 1960 and attending the College Health Service, note that the proportion of students with psychiatric disorders amongst those studying psychology was more than double that amongst the rest of the student community. It was also found that although this trend existed amongst the female students, it was only statistically significant amongst the males – although, taking the students as a whole, males were not significantly more liable to psychiatric disorders.

(vii) Davidson and Hutt (1964)

Davidson and Hutt (1964), in a retrospective study of students attending The Warneford Hospital near Oxford University, from September 1950 to June 1961, note that the common psychiatric diagnostic categories were present in the student community and their distribution was similar to that occurring in the general psychiatric population. Likewise, on the basis of the study, there was no evidence to suggest that there was any factor associated with the University as such which predisposes the students to psychiatric illness.

(viii) Dunn, Lanning, Patch and Sturrock (1980)

Dunn et al. (1980), in a retrospective study of students attending the College Mental Health Center in Boston, Massachusetts, from June 1956 to May 1964, note that male attendees were given the diagnosis either of psychosis or adjustment reaction or were described as having no mental illness more often than females. On the other hand, female attendees were more often seen as depressed ($\chi^2 = 14,37$; $\rho < 0,02$).

(ix) Fox and Reifler (1967)

Fox and Reifler (1967), in a retrospective study of students attending the Psychiatry section of the Student Health Service at the University of North Carolina, from June 1956 to May 1964, note that not only is the number of students seeking psychiatric attention each year steadily increasing, but it is increasing at a faster rate than the growth rate of the student population of the University of North Carolina. This increase can be partially explained by increased awareness amongst students of the availability of professional psychiatric help and the increased inclination of more students with situational or adjustment problems to talk with a psychiatrist without defining themselves as psychiatric patients.

(x) Friedman and Coons (1969)

Friedman and Coons (1969), in a retrospective study of students attending the Psychiatric Division of the Indiana University Student Health Center, from September 1966 to June 1967, note that approximately 41 per cent of the total patient population were diagnosed as either adjustment reaction of adolescence or passive-aggressive personality. Neither of these diagnoses are suggestive of the presence of a considerable amount of psychopathology, although the disturbance may be debilitating and, in the latter diagnosis, possibly chronic. Other diagnoses which reflected transient situational stress or the absence of identifiable psychiatric disorder accounted for another 19 per cent of the patient population. Therefore, nearly 60 per cent of patients were given psychiatric labels which do not reflect major psychiatric disturbance.

(xi) Gibbs (1975)

Gibbs (1975), in a retrospective study of Black students attending the Mental Health Clinic of Cowell Health Center at Stanford University, from September 1969 to June 1972, states that, when compared to the non-Black clinic population, Black users were more likely to experience severe identity crises, social maladjustments with significant others, academic problems and psychophysiological disorders.

- Affective complaints were present in nearly three-fourths of students, who complained of feelings of acute depression, anger, or anxiety. These feelings could often be traced to problems in other areas of social, personal, or academic adjustment.
- Ethnic identity conflicts affected nearly half of users, with Blacks from working-class or lower-class backgrounds, with more limited exposure to integration, expressing their identity conflicts in feelings of inferiority vis a vis the

middle-class White culture, anxiety about competing academically, feelings that they were not welcome in campus activities, and ambivalence toward middle-class Black students who could adapt to the majority culture.

- Interpersonal problems seemed to be more frequent and more intense among those students who lived in dormitories/residences with concentrations of Black students.
- Academic problems affected over a third of student attendees, resulting in anxiety or depression which was interfering with the student's ability to perform academic tasks effectively. Most of the students attributed their difficulties to poor high school preparation, poor study habits, and lack of self-confidence. The students who had been admitted under altered admission criteria in the Task Force Program were overrepresented in the user group.
- Psychosomatic complaints were registered by 25 per cent of the students; these included sleep disturbances and symptoms involving the gastrointestinal, cardio-pulmonary, or central nervous systems.
- Family problems involved nearly one-fourth of the students who complained of problems with their parents or families, usually centring around the issues of autonomy, financial management, social activities and socio-political attitudes and involvement. Lower-class Black students were further handicapped in their drive for autonomy by two other characteristics of their culture – their circumscribed environment, which limited their opportunities for adapting to new situations, and their extended family structure, which emphasises collective priorities and goals and frequently does not reward individual efforts to achieve or to differentiate oneself from the rest of the family.

(xii) Hersch, Nazario and Backus (1983)

Hersch, Nazario and Backus (1983), in a retrospective study of students attending the Mental Health Division of the University of Massachusetts, from October 1980 to May 1981, note that conditions not attributable to mental disorder (V-codes) and adjustment disorders were the most frequently recorded categories on Axis I of the DSM (Diagnostic and Statistical Manual of Mental Health Disorders) III diagnostic system employed to provide a shared conceptual framework and a uniform standard in diagnoses for quality assessment purposes. These results are in keeping with a developmental perspective for young adults and with a short-term treatment approach adopted by the clinic.

(xiii) Horenstein (1976)

Horenstein (1976), in a retrospective study of students attending the Psychological Clinic at the University of Kansas, from December 1970 to May 1972, notes that, contrary to the general consensus that the academic area of students' lives crates the greatest number of emotional problems, his study indicated that concern over "self" (i.e. self-satisfaction, self-image, etc.) is the greatest source of problems for students who seek psychological services. It is quite possible that university or university-related problems contributed to student concern in the area of self.

(xiv) Jones (1972)

Jones (1972), in a retrospective study of students attending the Student Health Service at the University of Melbourne, from January 1966 to December 1971, notes that the greater proportion of students presenting

to the psychiatric services were suffering from anxiety or depression, as they would in any general psychiatric out-patient clinic. He claims that these diagnoses seem to be common to Australian culture rather than to students in particular. Since the students investigated represent a selected group, it is probable that the number of those with an underlying personality disorder is exaggerated, and it would be incorrect to conclude that 60 per cent of all individuals on the campus who develop symptoms of anxiety or depression have an underlying personality disorder, but it does mean that if students have substantial symptoms of anxiety or depression, the probability that they will have a personality disorder is increased to some extent.

(xv) Kidd and Caldbeck-Meenan (1966)

Kidd and Caldbeck-Meenan (1966), in a retrospective study of students attending all psychiatric services of the University Health Services at the University of Edinburgh and Queen's University of Belfast as well as the hospital services and private psychiatric facilities of Edinburgh and the South-East of Scotland and of Belfast and Northern Ireland, during unspecified one year study periods (circa 1960), note the similarity of the nature and the prevalence of psychiatric disorders among the two study cohorts at these two universities, despite the differences that exist between the universities and the characteristics of the students studying there. There was little severe mental illness reported with the prevalence of psychiatric disorders found among the two cohorts not differing significantly from the age-specific rates found among young people in the general population.

(xvi) Maclay (1967)

Maclay (1967), in a retrospective study of students attending the Health Service at Birmingham University, from January 1964 to December 1965, highlights the negative consequences of mental ill-health with the finding that 20,9 per cent of "severe" cases (students who, by virtue of their mental state, were severely disabled and unable to function satisfactorily in the University because of it) withdrew prematurely from the University, indicating that severe psychological disturbance is a serious hazard to the successful completion of a university career.

(xvii) Rosecan, Goldberg and Wise (1992)

Rosecan, Goldberg and Wise (1992), in a retrospective study of undergraduate students admitted to the inpatient psychiatric unit of Georgetown University Hospital from January 1987 to December 1989, report that the most common identifiable stressors affecting 65 per cent of hospitalised students were related to either the academic cycle (e.g. return to school, midterm examinations, holidays or end of school year) or academic difficulty and pressure per se. The authors note that college (university) students represent a distinct population in an in-patient psychiatry unit insofar as they typically present in crisis, stabilise in hours or days, and focus very quickly on discharge. This capacity for reintegration reflected by these

students is not surprising, given that they represent a preselected group chosen by an office of undergraduate admissions for, among other qualities, past accomplishment and personal adaptivity (adaptability).

(xviii) Selzer (1960)

Selzer (1960), in a retrospective study of students attending the Mental Hygiene Clinic of the University of Michigan Health Service, from July 1956 to December 1957, including two separate study groups, note an unexpectedly low percentage of adjustment problems (14,2 and 3,8 per cent, respectively) and a relatively high percentage of schizophrenes (17,8 and 24,6 per cent, respectively). The author states that the discrepancy between results obtained for the two study groups and previous studies of other college mental health services may be attributable to the fact that many Michigan University students with problems of less magnitude are not seen by a psychiatrist – the source of data for this study.

(xix) Stangler and Printz (1980)

Stangler and Printz (1980), in a retrospective study of students attending the Psychiatric Clinic for Students at Hall Health Center at the University of Washington, during an unspecified circa five month study period (assessed from one year attendance figures), state that the high frequency of adjustment disorder with depressed mood is to be expected in their study population as sequelae to the many stressors of the university experience: relationship conflicts and loss, academic demands and failure, and separation from home and family.

(xx) Swartz, Posin and Kaye (1958)

Swartz, Posin and Kaye (1958), in a retrospective study of students attending the Division of Student Health at Boston University, from August 1952 to September 1956, note that most of the students seen (78 per cent of attendees) presented emotional problems consistent with long-standing emotional difficulties (i.e. full-blown neuroses and character disorders) while only 11 per cent of attendees were affected by transient adjustment problems.

(xxi) U'ren, Conrad and Patterson (1973)

U'ren, Conrad and Patterson (1973), in a retrospective study of cadets attending the Mental Hygiene Consultation Service of the US Military Academy at West Point, from July 1970 to June 1971, note that, for a variety of reasons (including the selection of a less prejudicial diagnosis), adjustment reaction of adolescence was diagnosed frequently. This diagnosis implies that there is an absence of serious underlying mental disorder, symptoms represent a response to overwhelming stress and symptoms disappear as the

stress diminishes. In addition, the frequency of psychophysiological reactions was high and two-thirds of them occurred during basic training in July and August.

(xxii) Winer and Dorus (1972)

Winer and Dorus (1972), in a retrospective study of students attending the Student Mental Health Clinic at the University of Chicago, from September 1968 to June 1970, note that it was an unexpected finding to discover that, contrary to popular current notions about the orientation of the modern college student, nearly one half of all attendees of their clinic expressed concern or dissatisfaction with their academic achievement. These academic problems often occurred in the context of another problem – such as "opposite sex peer" problems.

APPENDIX IIb

Developing (third world) countries

(i) German and Arya (1969)

German and Arya (1969), in a retrospective study of students attending the College Health Service of Makerere University College, during a one year study period spanning 1966 and 1967, note that the majority of psychiatric cases fell into the psychoneurotic category – especially fears of venereal disease. This is a good example of a local preoccupation colouring the symptomatology of a common psychiatric condition. The strain experienced by East African students in respect of examinations appears to be greater than that affecting students elsewhere – a finding which might be related to language difficulties and the enormous emphasis placed on academic success by families and society.

(ii) Wig, Nagpal and Khanna (1971)

Wig, Nagpal and Khanna (1971), in a retrospective study of students attending the Student Counselling Centre at Panjab University from September 1967 to June 1968, report that 54,5 per cent of attendees suffered from personality problems and adjustment reactions. The presenting complaints, however, were to a great extent directly related to the source of referral as attendees referred by the Heads of teaching departments presented problems that were generally academic study difficulties while those who sought help voluntarily mostly complained of psychological difficulties. The authors also note that most of the students affected by anxiety neuroses have a personal predisposition which is precipitated by an anxiety reaction in the course of their adjusting to the complex social milieu of the university. In their study, 22 per cent of attendees were severely disturbed and another 47 per cent were affected by marked impairment from symptoms of their presenting complaints.

APPENDIX III

Data collection and coding – additional material to outline appearing in section 4.2.

(a) "Patients Stat Details Sheet"

(b) Unmodified diagnostic coding system employed at UCT-SHS-MHS

(c) Modified diagnostic coding system employed in UCT-SHS study

APPENDIX IIIa

Figure A.5 "Patients Stat Details Sheet" employed by the UCT-SHS-MHS for the purpose of data collection

DATE: .....
NAME: .....
CODE: .....

CLINIC: MAIN ☐
AFTER-HOURS ☐
SATELLITE ☐

STUDENT HEALTH SERVICE

PATIENTS STAT DETAILS SHEET

NB: Please fill in all sections of form, or it will be returned to you!

STUDENT NAME AND SURNAME	STUDENT NUMBER	AGE	SEX M/F	RACE W/B/C/A/H	IN RES Y/N	MED AID Y/N	FIN AID Y/N	CONSULT. CODE	DIAG. CODE	CHARGE R	CHARGE C	REMARKS

APPENDIX IIIb

Diagnostic coding system (modified from DSM IIIR) employed by the UCT-SHS-MHS for psychological and psychiatric complaints

PSYCHOLOGICAL/PSYCHIATRIC DIAGNOSIS

Key code = P

Diagnosis	CODE
AFFECTIVE DISORDER: sub-key = A	
(a) Bipolar	PAB
(b) Major depressive	PAM
(c) Dysthymia (reactive)	PAD
ADJUSTMENT DISORDER: sub-key = J	
(a) with depressed mood	PJD
(b) with mixed emotional features	PJM
(c) with academic inhibition	PJA
PSYCHOSIS	PP
EATING DISORDER: sub-key = E	
(a) Anorexia	PEA
(b) Bulimia	PEB
PERSONALITY DISORDER	PPD
SUBSTANCE ABUSE: sub-key = S	
(a) Alcohol	PSA
(b) Drug	PSD
V-CODES: sub-key = V	
(a) Relationship problem	PVR
(b) Family problem	PVF
(c) Bereavement	PVB
(d) Pre- and post-termination counselling	PVP
(e) Academic problem	PVA
SEXUAL DYSFUNCTION (and specify longhand)	PXS
GENDER ISSUES	PG
PHOBIA (and specify longhand)	PF
*EXTRA-TIME ASSESSMENT	PET
ANXIETY DISORDER: sub-key = N	
(a) Obsessive compulsive	PNO
(b) Phobic	PNF
(c) Panic	PNP
(d) Post-traumatic stress syndrome	PNT
(e) Generalised anxiety	PNG
(f) Exam anxiety	PNE
(g) Hysterical disorder	PNH
OTHER (specify longhand)	PO

*Extra-Time Assessment (PET)

Students with Minimal Brain Dysfunction Syndrome, often presenting as dyslexia (in particular) or subtle motor co-ordination problems, are seen by the chief clinical psychologist (Mrs J. Taljaard-Plaut during the study period) and (often) subsequently referred for psychometric assessment at a venue outside of the UCT-SHS-MHS. Confirmation of any disability that could lead to impaired examination performance is compensated by an increased time allocation (usually 5 to 10 minutes per hour) for any written examination.

APPENDIX IIIc

Modification of diagnostic coding system employed by the UCT-SHS-MHS for psychological and psychiatric complaints to facilitate data analysis

PSYCHOLOGICAL/PSYCHIATRIC DIAGNOSIS

Key code = P

Diagnosis		CODE
AFFECTIVE DISORDER: sub-key = A		
(a)	Bipolar	PAB
(b)	Major depressive	PAM
(c)	Dysthymia (reactive)	PAD
ADJUSTMENT DISORDER: sub-key = J		
(a)	with depressed mood	PJD
(b)	with mixed emotional features	PJM
(c)	with academic inhibition	PJA
V-CODES: sub-key = V		
(a)	Relationship problem	PVR
(b)	Family problem	PVF
(c)	Bereavement	PVB
(d)	Pre- and post-termination counselling	PVP
(e)	Academic problem	PVA
ANXIETY DISORDER: sub-key = N		
(a)	Obsessive compulsive	PNO
*(b)	Phobic + Phobia	PNF + PF
(c)	Panic	PNP
(d)	Post-traumatic stress syndrome	PNT
(e)	Generalised anxiety	PNG
(f)	Exam anxiety	PNE
(g)	Hysterical disorder	PNH
PSYCHOSIS		PP
EATING DISORDER: sub-key = E		
(a)	Anorexia	PEA
(b)	Bulimia	PEB
PERSONALITY DISORDER		PPD
SUBSTANCE ABUSE: sub-key = S		
(a)	Alcohol	PSA
(b)	Drug	PSD
SEXUAL DYSFUNCTION		PXS
GENDER ISSUES		PG
EXTRA-TIME ASSESSMENT		PET
OTHER (specify longhand)		PO

Explanatory notes for modification of diagnostic coding system employed by UCT-SHS-MHS:

*There is no clinical indication for phobia (PF) to be treated as a separate psychological or psychiatric disorder to phobic anxiety disorder (PNF) – hence the amalgamation of these separately coded disorders into a single entity for the purpose of data analysis.

[This process is compatible with DSM III classification of phobic disorders.]

APPENDIX IV

Geographic techniques – additional detailed descriptions of Postal Code Groupings (PCGs) within metropolitan Cape Town employed for the residence (home address) -specific variable to list appearing in section 4.3.

(a) Correlation of Postal Code Groupings (PCGs) within metropolitan Cape Town

(b) Grouping of individual suburbs of metropolitan Cape Town into Postal Code Groupings (PCGs)

APPENDIX IVa

Table A.1 Correlation of Postal Code Groupings (PCGs) within metropolitan Cape Town (ER-01) with individual suburbs.

Code No.	Postal Code Range	Region (Suburban Distribution)
15	7400-7499	Maitland-Goodwood
16	7500-7599	Parow-Blackheath
18	7700-7749	Greater Rondebosch
19	7455	Langa
20	7750	Guguletu
21	7755	Nyanga East
22	7756-7775 & 7781	Greater Athlone
23	7784	Khayelitsha
24	7785	Mitchell's Plain
25	7800	Greater Wynberg
26	7900-7940	Observatory-Woodstock
27	7945-7995	Muizenberg-Ocean View
28	8000-8115	City-Sea Point

APPENDIX IVb

Figure A.6 Grouping of individual suburbs of metropolitan Cape Town into Postal Code Groupings (PCGs) (adapted from Cape Metropolitan Council (CMC) geocoded map).

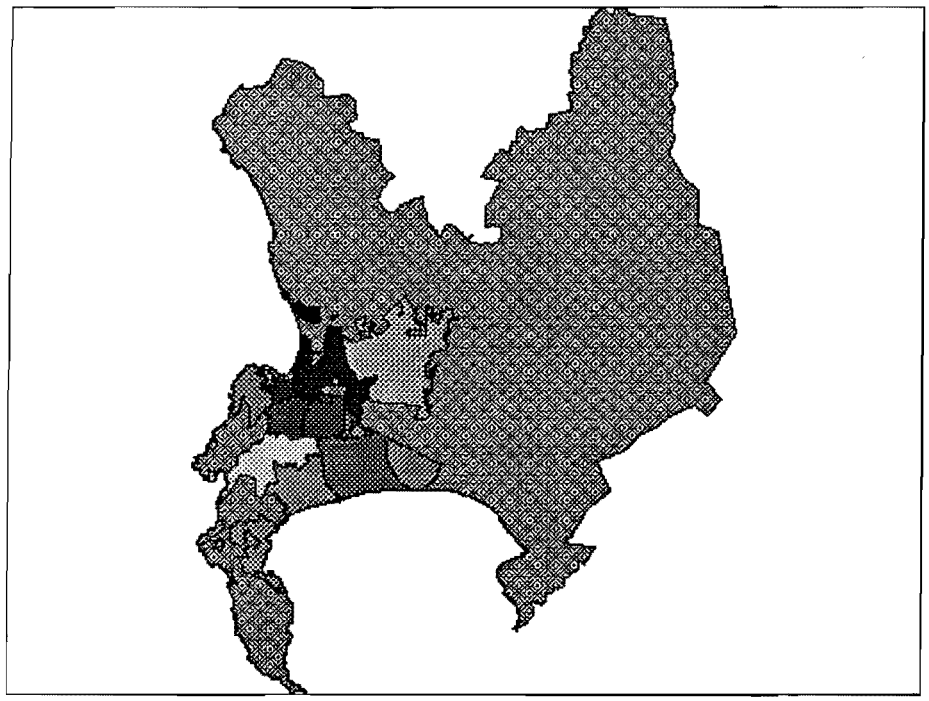


Table A.2 Grouping of individual suburbs of metropolitan Cape Town into Postal Code Groupings (PCGs) (adapted from Cape Metropolitan Council (CMC) geocoded map).

(a) Code No. 15 - Maitland-Goodwood				
Acacia Park	Clarkes	Louw's Bush	Pinelands	Thornton
Adriaanse	Connaught	Maitland	Ravensmead	Tijgerhof/Sanddrift
Avon	Cravenby	Maitland Garden Village	Richmond Estate	Townsend Estate
Avonwood	Edgemead	Matroosfontein	Richwood	Tygerdal
Balvenie	Elnor	Milnerton	Riverton	Uitsig
Bishop Lavis	Epping Forest	Modderdam	Rugby	Valhalla
Bloubergstrand	Eureka	Montana/Durheim	Ruyterwacht	Valhalla Park
Boquinar	Factreton	Monte Vista	Salberau	Vasco Estate
Bothasig	Goodwood Estate	Ndabeni	Table View	Wingfield
Brooklyn	Kalksteenfontein	Nooitgedacht	The Range	Ysterplaat
Charlesville	Kensington	Norwood		
(b) Code No. 16 - Parow-Blackheath:				
Avondale	Boston	Hoheizen	Oosterzee	Sarepta
Belcon	Brackenfell	Joostenbergvlakte	Panorama	Scottsdene
Belhar	Chrismar	Kempenville	Parow	Scottsville
Bellair	Churchill	Kenridge	Parow East	Stellenberg
Bellville Central	Clam-Hall	Kraaifontein	Parow North	Stellenridge
Bellville East	Door De Kraal	Kuilsrivier	Parowvallei	Stikland
Bellville South	Durbanville	La Rochelle	Peerless Park	Thalman
Bellville West	Eikendal	Labiance	Plattekloof	Vredenberg
Belmont Park	Eversdal	Loevenstein	Proteavallei	Welgelegen
Blackheath	Fairfield	Maastrecht	Richmond	Welgemoed
Blomtuin	Glenhaven	Northpine	Richworth	Windsor Estate
Bonny Brook	Glenlilly	Oakdale	Rustdal	Windsor Park
Bo-Oakdale	Groenvallei	Oakglen	Sanlamhof	Zoo Park
Bosbell				

(c) Code No. 18 – Greater Rondebosch:				
Bishops Court	Kenilworth	Newlands	Rosebank	Sybrand Park
Claremont	Mowbray	Rondebosch		
(d) Code No. 19 - Langa:				
Langa				
(e) Code No. 20 - Guguletu:				
Guguletu				
(f) Code No. 21 - Nyanga East:				
Crossroads	Nyanga			
(g) Code No. 22 - Greater Athlone:				
Athlone	Crawford	Kew Town	Pinati	Silvertown
Belgravia	Gatesville	Lansdowne	Primrose Park	Surrey
Belthorn Estate	Hanover Park	Manenberg	Rondebosch East	Vanguard
Bonteheuwel	Hazendal	Newfields	Rylands	Welcome
Bridgetown	Heideveld	Penlyn Estate		
(h) Code No. 23 – Khayelitsha:				
Khayelitsa				
(i) Code No. 24 - Mitchell's Plain:				
Beacon Valley	Lentegeur	Philippi	Rocklands	Weltevreden Valley
Browns Farm	Mandalay	Philippi Rural	Strandfontein	Westridge
Colorado	Mitchell's Plain Centre	Portlands	Tafelsig	Woodlands
Eastridge				
(j) Code No. 25 - Greater Wynberg:				
Constantia	Llandudno	Ottery East	Royal Cape	Wetton
Diep River	Meadowridge	Parkwood	Southfield	Wynberg
Fairways	Ottery	Plumstead	Tokai	Youngsfield
Hout Bay				
(k) Code No. 26 – Observatory-Woodstock:				
Observatory	Salt River	Woodstock	Zonnebloem	
(l) Code No. 27 – Muizenberg-Ocean View:				
Bergvliet	Heathfield	Lotus River	Retreat	Sun Valley
Clovelly	Kalk Bay	Marina Da Gama	Scarborough	Sunnydale
Constantia	Kirstenhof	Montagu's Gift	Simon's Town	Westlake
Elfindale	Kommetjie	Muizenberg	St James	Zeekoevlei
Fish Hoek	Lakeside	Ocean View	Steenberg	Zerilda Park
Grassy Park	Lavender Hill	Pelican Park		
(m) Code No. 28 - City-Sea Point:				
Bantry Bay	Clifton	Green Point	Schotschekloof	Three Anchor Bay
Camps Bay/Bakoven	Fresnaye	Mouille Point	Sea Point	Vredehoek
Cape Town Centre	Gardens	Oranjezicht	Tamboerskloof	

Figure A.7 Grouping of individual suburbs of metropolitan Cape Town into Postal Code Groupings (PCGs) (adapted from geocoded map produced by Michael Rip of the University of Cape Town Department of Community Health – e.g. Rip, Keen and Kibel, 1986).

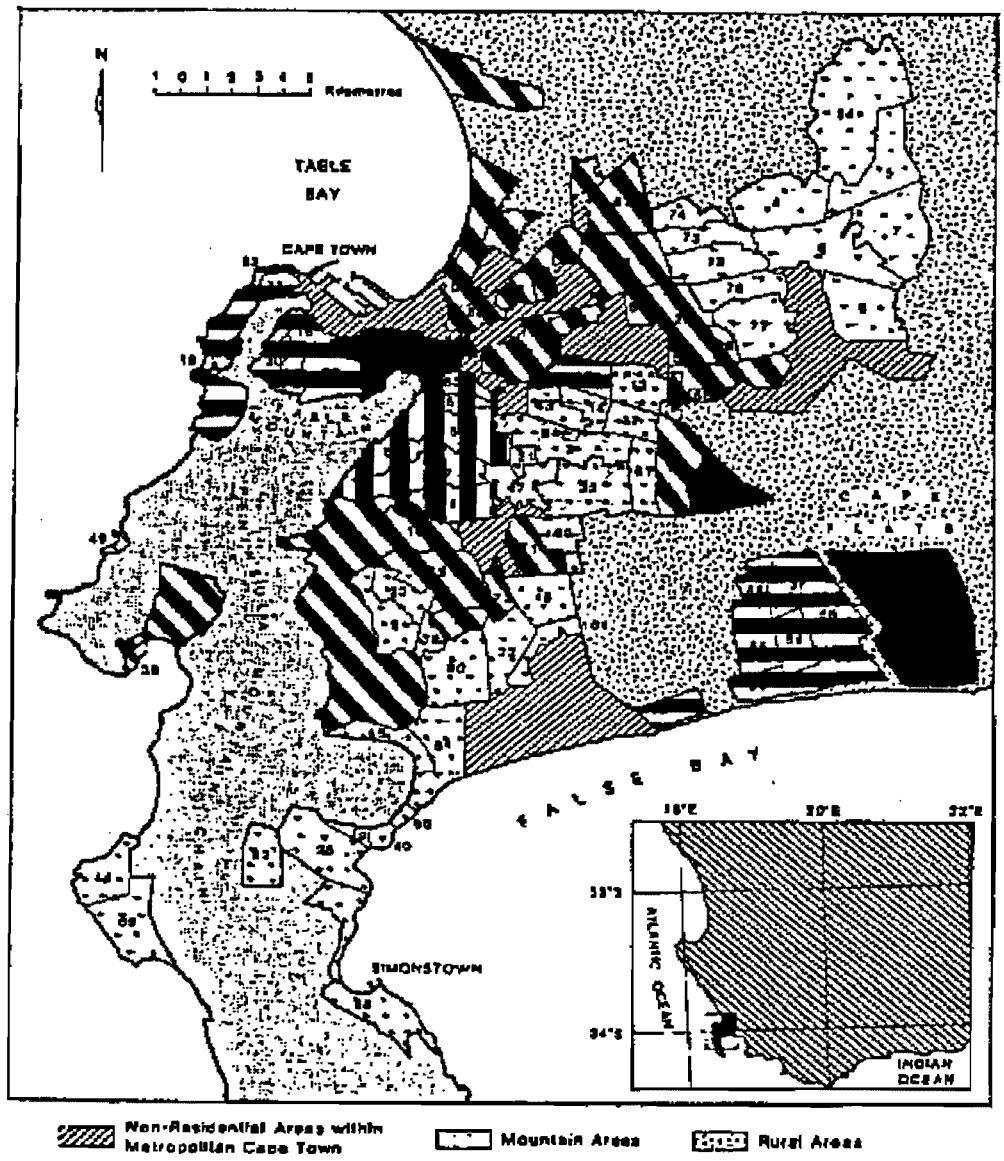


Table A.3 Correlation of individual suburbs of metropolitan Cape Town and their postal codes.

Suburb Name (and Code)		Postal Code (post 1980)	Suburb Name (and Code)		Postal Code (post 1980)
Acacia Park	1	–	Rocklands	54	7785
Athlone	2	7764	Westridge	55	7785
Belhar	3	7490	Portlands	56	7785
Bellville North 1	4	7530	Lentegeur	57	7785
Bellville North 2	5	7530	Beacon Valley	58	7785
Bellville Central	6	7530	Woodlands	59	7785
Bellville East	7	7530	Eastridge & Tafelsig	60	7785
Bellville South	8	7530	Monte Vista	61	7460
Bergvliet	9	7945	Mouille Point	62	8001
Bishop Lavis	10	7490	Mowbray	63	7700
Bishopscourt	11	7700	Muizenberg	64	7951
Bonteheuwel	12	7764	Newlands	65	7700
Bothasig	13	7441	Nooitgedacht	66	7490
Bridgetown	14	7764	Nyanga	67	7755
Camps Bay	15	8001	Observatory	68	7925
Cape Town	16	8001	Ocean View	69	7975
Claremont	17	7700	Oranjezicht	70	8001
Clifton	18	8001	Ottery	71	7800
Clovelly	19	7975	Parkwood	72	7800
Constantia & Tokai	20	7800	Parow North 1	73	7500
Crawford	21	7764	Parow North 2	74	7500
Crossroads	22	–	Parow Central	75	7500
Diep River	23	7945	Parow South 1	76	7500
Durbanville	24	7550	Parow South 2	77	7500
Edgemead	25	7441	Pinelands	78	7405
Elsies River	26	7490	Plumstead	79	7800
Factreton	27	7405	Retreat	80	7945
Fish Hoek	28	7975	Rondebosch	81	7700
Fresnaye	29	8001	Rosebank	82	7700
Gardens	30	8001	Ruyterwacht	83	7460
Goodwood	31	7460	Rylands	84	7764
Grassy Park	32	7945	Salt River	85	7925
Green Point	33	8001	Sanddrift	86	7441
Guguletu	34	7750	Sea Point	87	8001
Hanover Park	35	7764	Simonstown	88	7995
Heathfield	36	7764	Southfield	89	7800
Heideveld	37	7764	St James	90	7951
Hout Bay Harbour	38	7800	Strandfontein	91	7785
Hout Bay	39	7800	Sun Valley	92	7975
Kalk Bay	40	7975	Table View	93	7441
Kenilworth	41	7700	Tamboerskloof	94	8001
Kensington	42	7405	Thornton	95	7460
Kewton	43	7764	Uitsig	96	7490
Kommetjie	44	7976	Valhalla Park	97	7490
Lakeside	45	7945	Vredehoek	98	8001
Langa	46	7455	Walmer	99	7925
Lansdowne	47	7764	Wetton	100	7764
Lotus River	48	7945	Woodstock	101	7925
Llandudno	49	7800	Wynberg	102	7800
Maitland	50	7405	Ysterplaat	103	7405
Mannenberg	51	7764	Zeekoevlei	104	7945
Matroosfontein	52	7490	Khayelitsha	"105"	7784
Milnerton	53	7441			

Table A.4 Grouping of individual suburbs of metropolitan Cape Town into Postal Code Groupings (PCGs) (adapted from geocoded map produced by Michael Rip of the University of Cape Town Department of Community Health – e.g. Rip, Keen and Kibel, 1986).

Postal Code Grouping	Individual Suburb Code
15	(1); 3; 10; 13; 25; 26; 27; 31; 42; 50; 52; 53; 61; 66; 78; 83; 86; 93; 95; 96; 97; 103
16	4; 5; 6; 7; 8; 24; 73; 74; 75; 76; 77
18	11; 17; 41; 63; 65; 81; 82
19	46
20	34
21	(22); 67
22	2; 12; 14; 21; 35; 37; 43; 47; 51; 84; 100
23	"105"
24	54; 55; 56; 57; 58; 59; 60; 91
25	20; 38; 39; 49; 71; 72; 79; 89; 102
26	68; 85; 99; 101
27	9; 19; 23; 28; 32; (36); 40; 44; 45; 48; 64; 69; 80; 88; 90; 92; 104
28	15; 16; 18; 29; 30; 33; 62; 70; 87; 94; 98

APPENDIX V

Diagnostic criteria – additional detailed DSM IIIR definitions of major diagnostic categories and selected mental disorders employed in the UCT-SHS study to list appearing in section 4.3.

(a) Affective disorder

(b) Adjustment disorder

(c) V-Codes

(d) Anxiety (neurotic) disorder

(e) "Other" disorders

Note:

The DSM IIIR definitions outlined in Appendix V were obtained from "DSM IIIR training guide: for use with the American Psychiatric Association's Diagnostic and Statistical Manual of mental disorders (Third Edition - Revised)" (Reid and Wise, 1989) and not directly from the DSM IIIR itself.

APPENDIX Va

Affective disorder

(i) Bipolar disorder

A: Essential features

In bipolar disorder, one or more manic or hypomanic episodes are usually associated with one or more depressive episodes. Bipolar disorders are subclassified as either mixed, manic, or depressed according to the clinical features of the current or most recent episode.

B: Associated features

An individual with bipolar disorder frequently resists treatment. Clinical features include mood lability (e.g. rapid shifts from anger to depression) and depressive symptoms that may last moments, minutes, or days. Depressive and manic symptoms may occur simultaneously or may alternate. Patients with two or more complete cycles (a manic and a major depressive episode that follow each other without a period of remission) within a year have been referred to as "rapid cyclers".

(ii) Major depressive episode

A: Essential features

The person must have for at least a two-week period either a depressed mood (in children or adolescents the mood may be irritable) or loss of pleasure or interest in almost all activities (sometimes referred to as anhedonia). In addition, at least four other depressive symptoms are present. The major depressive episode is not initiated or maintained by an organic aetiology, is not secondary to uncomplicated bereavement, and is not superimposed on a psychotic disorder. Delusions and/or hallucinations may accompany the mood disturbance, but the delusion or hallucination cannot exist without the accompanying mood disturbance for longer than two weeks.

B: Associated features

Accompanying clinical features may include tearfulness, anxiety, obsessive ruminations, panic attacks, phobias, and excessive health concerns. When delusions and hallucinations occur, they are usually mood-congruent. For example, the individual may believe that his bowels are rotting in spite of normal medical evaluations.

(iii) Dysthymia

A: Essential features

Dysthymia is a chronic mood disturbance involving frequent periods of depressive mood or anhedonia. Specifically, during a two-year period: (i) depressive symptoms are absent for no more than two months, and (ii) no major depressive episode occurs. The diagnosis is not made if the disturbance is superimposed on a psychotic disorder, or if the disturbance is initiated or sustained by an organic etiology.

B: Associated features

There are no delusions or hallucinations. Individuals with dysthymia often also have an Axis II personality disorder. Major depressive episodes are superimposed on this disorder ("double-depression"). Depressed children and adolescents often show deterioration in school performance and behaviour.

APPENDIX Vb

Adjustment disorder

Essential features

An adjustment disorder is a maladaptive reaction to a psychosocial stressor or stressors that manifests itself as impairment in occupational function, social activities, or interpersonal relationships. The symptoms are in excess of a normal or expected reaction to the stressor(s) and are not part of a pattern of overreaction to stress (e.g. histrionic personality disorder) or an exacerbation of a mental disorder. According to DSM IIIR, the disturbance must begin within three months after the onset of the psychosocial stress and last no longer than six months. When the diagnosis is made, it is assumed that the disturbance will cease shortly after discontinuation of the stressor or, in the face of a continuing stressor, that a new level of adaptation will be achieved.

The severity of the reaction is not altogether predictable from the intensity of the stressor. Certain individuals may have a severe disturbance with a seemingly mild stressor; others may have a mild reaction to a severe stressor. Stressors may be single, recurrent, or continuous.

Nine different types of adjustment disorder are listed in DSM IIIR. Disorders are classified according to the predominant symptoms. Note that adjustment disorders are partial syndromes of more specific disorders. For example, adjustment disorder with depressed mood is a depressive syndrome that does not meet the full criteria for a major depression and that develops after a psychosocial stressor.

(i) Adjustment disorder with depressed mood

Essential features

Predominant manifestations are symptoms such as depressed mood, feelings of worthlessness, and decreased self-esteem.

(ii) Adjustment disorder with mixed emotional features

Essential features

The predominant manifestations are a combination of emotional symptoms, such as those found in adjustment disorders with anxious and depressed moods.

(iii) Adjustment disorder with academic inhibition

Essential features

The predominant manifestation is inhibition of academic function that occurs in a person whose previous performance was adequate.

APPENDIX Vc

V-codes

These categories, which should not be listed as "diagnoses" or as evidence of mental illness, fill a need for description of conditions which reasonably are of clinical interest, or which require attention or treatment. The V-code listings correspond to the ICD-9-CM "Supplementary Classification", as relevant for psychiatrists. They are briefly addressed in DSM IIIR.

(i) Relationship problem

A: Marital problem

This category should be used when the focus of attention or treatment is a marital problem that is apparently not due to a mental disorder. Marital conflict in itself should not be considered mental illness.

B: Other interpersonal problem

This category may be used, for example, for counselling concerning difficulties with co-workers or "romantic partners".

(ii) Family problem

A: Parent-child problem

This category may be used, for example, for conflict between a healthy adolescent and his or her parents which falls within the normal range of developmental experiences.

B: Other specified family circumstances

This category may be used when the focus of attention or treatment is a family circumstance not apparently due to a mental disorder, but not a parent-child or a marital problem. Interpersonal difficulties with other relatives are examples.

(iii) Bereavement

This category should be used to describe normal reactions to significant loss, particularly the death of a loved one. Depressive syndromes may be normal in such situations, but appropriate handling of feelings and situations by the individual, over time, with normal resolution of the symptoms, should preclude diagnosis of a mental disorder and suggest a V code. It should be noted that "normal" feelings, behaviours, and durations of grief vary considerably in different cultural groups.

(iv) Academic problem

This category is appropriate when the focus of attention or treatment is an academic problem not apparently due to a mental disorder (e.g. under-achievement in the absence of a specific developmental disorder or other clinical explanation for the problem).

APPENDIX Vd

Anxiety (neurotic) disorder

(i) Obsessive compulsive disorder

A: Essential feature

The essential feature of this disorder is recurrent obsessions or compulsions sufficiently severe to cause marked distress, consume considerable time, and/or significantly interfere with the patient's normal routine and/or occupational, social, or interpersonal functioning. The obsessions (or at least the energy consumed by them) are dysphoric. Attempts to resist the compulsions lead to a sense of mounting tension that can be immediately relieved by yielding to the compulsion.

B: Associated features

Depression, anxiety, phobic avoidance of situations related to obsessions (e.g. dirt, contamination).

(ii) Simple phobia

A: Essential feature

This disorder is characterised by a persistent fear of a *circumscribed* stimulus, which may be an object or a situation, *other than* fear of having a panic attack or a social phobic situation. During some phase of the disturbance, exposure to the simple phobic stimulus almost invariably provokes an immediate anxiety response, and marked anticipatory anxiety occurs if exposure is imminent. The diagnosis is made only if the avoidant behaviour interferes with the person's normal routine, social activities, or relationships, or if there is marked distress about having the fear.

B: Associated features

Unrelated social phobia and panic disorder with or without agoraphobia are often present.

(iii) Panic disorder

A: Essential features

This disorder is characterised by recurrent panic attacks. The attacks usually last minutes, and rarely last more than an hour. They are usually unexpected (i.e. not immediately associated with a known stressful or phobic setting) and are different from those described in the other anxiety disorders. The "unexpected" aspect is essential to the diagnosis of panic disorder.

B: Associated features

The patient is often apprehensive between attacks, usually in fear of having another attack. Some depressive disorder is often present. Agoraphobia is very common.

(iv) Post-traumatic stress disorder/syndrome

A: Essential feature

Characteristic symptoms following a psychologically distressing event that is outside the range of usual human experience. The original stressor is usually experienced with intense fear, terror, and/or helplessness.

The precipitating stressor must not be one which is usually well tolerated by most other members of the cultural group (e.g. death of a loved one, ordinary traffic accident). Post-traumatic stress disorder need not develop in every victim. Traumas may be experienced alone (e.g. rape, severe physical assault) or in groups (e.g. military combat, unusually serious automobile accidents). The stressor may arise from natural, accidental, or purposeful events.

B: Associated features

Depression and anxiety are common and may be diagnosed as separate disorders. Compulsive behaviour or changes of routine or lifestyle may occur. Pseudo-"organic" symptoms, such as memory problems, difficulty in concentrating, or emotional lability, may occur and may be confused with somatoform disorders. "Survivor's guilt" may occur, particularly if others were killed in the traumatic event. Impairment may be

mild or severe and may affect almost any aspect of life. Phobic avoidance of real or symbolic reminders of the trauma may occur.

(v) Generalised anxiety

A: Essential feature

The essential feature of this disorder is unrealistic or excessive anxiety which is pervasive, chronic, and not solely associated with panic attacks.

B: Associated features

Depressive symptoms, unrelated panic disorder or depressive disorder

(vi) Hysterical disorder (conversion disorder – listed under somatoform disorders in DSM IIIR)

A: Essential features

The symptom is a loss of function, or a change in function, that implies a physical disorder. The symptom cannot be explained by any known pathophysiological mechanism or physical disorder and is not intentionally produced, as in malingering or factitious disorder. The symptom is apparently an expression of a psychological conflict or need. By definition, the complaint is not limited to pain (somatoform pain disorder), painful sexual dysfunction (sexual pain disorders), or merely one of the plethora of symptoms of somatisation disorder.

B: Associated features

The symptom usually appears suddenly, with onset during times of extreme psychosocial stress. Histrionic personality traits are sometimes seen.

APPENDIX Ve

"Other" disorders

(i) Brief reactive psychosis

A: Essential feature

Sudden onset of psychotic features of brief duration, with eventual full return to the premorbid functioning level. The symptoms are related to severe stress. Brief reactive psychosis should not be diagnosed in the presence of symptoms (including prodromal symptoms) of organic, schizophrenic, delusional, or mood disorder.

B: Associated features

Behaviour may be quite bizarre, with marked disturbance of speech or affect. Hallucinations or delusions are common; disorientation and temporary memory impairment frequently occur.

(ii) Eating disorder

A: Anorexia nervosa

– Essential features

Refusal to maintain body weight over a minimal normal weight for age and height; intense fear of gaining weight or becoming fat, even though underweight; distorted body image; and amenorrhoea in females. The disturbance of body image is manifested in the way in which the patient's weight, size, and shape are experienced (often as "I feel fat").

– Associated features

These include self-induced vomiting or use of purgatives (but the primary mode of weight loss is reduction in food intake). Weighing less than 85% of one's expected weight is a rough landmark, frequently followed by metabolic signs such as hypothermia, bradycardia, hypotension, oedema, lanugo (neonatal-like body hair), and amenorrhoea. Bulimic episodes, often followed by vomiting, frequent focus on food as a topic of thought or fantasy, and unusual hoarding or concealing of food are also seen. Patients almost always deny or minimise the severity of their illness and are resistant to therapy. Delayed psychosexual development is common in adolescence, as is decreased libido in adults. Compulsive behaviours may be present and may justify an additional diagnosis of obsessive-compulsive disorder.

B: Bulimia nervosa

– Essential feature

Recurrent episodes of binge eating (rapid eating of large amounts of food over a short period of time), with a feeling of lack of control over eating behaviour during these binges. The food consumed is often sweet and of high caloric content. It is usually eating inconspicuously or secretly, followed by abdominal discomfort, sleep, social interruption, or (frequently) induced vomiting to decrease the physical pain and distension. Vomiting allows either continued eating or termination of the binge and often reduces unpleasant feelings.

– Associated features

Obesity (although not required), depressed mood, substance abuse or dependence.

(iii) Personality disorder

According to DSM IIIR, personality disorders may be diagnosed when personality *traits* are inflexible and maladaptive and cause either significant functional impairment or subjective distress. These personality traits are enduring patterns of perceiving, relating to, and thinking about the environment and oneself. They are global in their presentation, rather than being limited to specific situations or times of life. Personality disorders are often recognisable by adolescence (although some should not be diagnosed until the patient is an adult) and continue through most or all of adult life.

The diagnostic criteria for personality disorders refer to behaviours or traits that are characteristic of: (i) recent functioning (e.g. during the past year) and (ii) long-term functioning (i.e. since early adulthood).

Many features of the various personality disorders may be seen during episodes of other mental disorders (e.g. dependency in major depression). The diagnosis of a personality disorder should be made only when the characteristic features are typical of long-term functioning and are not limited to discrete episodes of illness.

A: Diagnosis of personality disorders in children and adolescents

Provided relevant specific criteria are met, avoidant personality disorder and borderline personality disorder may be diagnosed in children and adolescents, as well as in adults. Some other personality disorders should be diagnosed in young persons only with caution, when the maladaptive personality traits appear to be quite stable. Antisocial personality disorder should not be diagnosed if the person is under 18. DSM IIIR relates

conduct disorder in childhood or adolescence to a corresponding diagnosis in adults of antisocial personality disorder.

B: Associated features

People with personality disorders rarely complain of the disorder themselves, although there may be a dissatisfaction with their ability to function effectively or to get along with others. Complaints of depression or anxiety are common.

C: Personality disorder clusters

DSM IIIR groups the personality disorders as follows: "Cluster A" includes paranoid, schizoid, and schizotypal personality disorders, characterised by odd or eccentric behaviours. "Cluster B" includes antisocial, borderline, histrionic, and narcissistic personality disorders which have in common frequent dramatic, emotional, or erratic behaviours. "Cluster C" includes avoidant, dependent, obsessive compulsive, and passive aggressive personality disorders, all frequently characterised by anxiety and fearfulness.

(iv) Psychoactive substance use disorder

The use of certain psychoactive substances is considered normal in our society. For example, taking prescribed medication to relieve insomnia or pain is a generally accepted practice. The recreational use of alcohol and the consumption of coffee, except among a few groups within our society, are also accepted behaviours. These practices lack the key elements that distinguish the psychoactive substance use disorders. To qualify as a disorder, the regular use of a psychoactive substance must lead to *culturally undesirable symptoms and maladaptive behaviours.*

Psychoactive substance use disorders lead to substance-induced maladaptive behaviours, whereas psychoactive substance-induced organic mental disorders refer to the direct or chronic effects of these substances on the central nervous system. Most individuals who regularly ingest psychoactive substances will have both a psychoactive substance use disorder and a psychoactive substance-induced organic mental disorder (particularly intoxication or withdrawal). Nine classes of psychoactive substances are associated with both dependence and abuse, and nicotine is associated with dependence but not abuse.

A: Essential features

As a result of regular psychoactive substance use, the individual develops impaired control of substance use and continues to use the substance in spite of adverse consequences. Dependence usually, but not always, includes the development of tolerance (i.e. one must increase the dose to maintain the same effects) and the development of withdrawal symptoms upon discontinuation or dosage reduction. In order to meet the diagnostic criteria for psychoactive substance dependence, some of the cognitive, behavioural, and/or physiologic symptoms from use of the chemical must persist for at least one month or occur repeatedly over a longer period of time.

B: Associated features

Repeated bouts of psychoactive substance-induced intoxication are almost always present in the history. Personality and mood disturbances are often present. In chronic abuse or dependence, mood lability, suspiciousness, and violent behaviour may be seen.

(v) Sexual dysfunction

A: Essential features

Sexual dysfunctions are characterised by inhibitions of appetitive or psychophysiological changes that characterise the complete "sexual response cycle". Sexual dysfunction diagnoses are ordinarily applied only when the disturbance is a major part of the clinical presentation (although it may not be part of the chief complaint). Sexual dysfunction diagnoses should not be made if the disturbance is attributed entirely to organic factors (e.g. a physical disorder, medication, or substance abuse) or if it is due to another Axis I mental disorder. Multiple diagnoses within the broad category of sexual dysfunctions are sometimes appropriate. The sexual dysfunctions are divided into disorders related to sexual desire, sexual arousal, orgasm, and sexual pain. The first three of these correspond to the first three phases of the "sexual response cycle":

1. Appetitive (fantasies and desires).
2. Excitement (arousal, physiological changes such as erection or lubrication, sexual pleasure).
3. Orgasm (peaking of sexual pleasure, release of sexual tension, rhythmic muscle and genital contractions, ejaculation).
4. Resolution (general and muscular relaxation, feeling of well-being, physiological refractoriness to further sexual activity [especially in males; not necessarily seen in females]).

B: Associated features

Sexual dysfunction complaints often outwardly focus on, or are associated with, problems in interpersonal relationships, depression, anxiety, or somatic symptoms.

(vi) Gender identity disorder

The disorders in this subcategory are characterised by incongruity between one's clinically assigned sex and his or her gender identity. That is, the patient's sense of knowing the sex to which he or she belongs – the private experience of gender role (as the public expression of gender identity) – is distorted. These disturbances are quite rare and should not be confused with common feelings of inadequacy at fulfilling one's gender expectations. Patients may present at any age, but in the majority the onset can be traced to childhood.

APPENDIX VI

Frequency and percentages – additional results for controls (Objective 2) and the total student community (Objective 3) for the non-abridged format of various selected demographic, academic, residential (home address) and financial assistance variables to those appearing in section 5.1.

(a) Age

(b) Level of study

(c) Year of study

(d) PCGs outside metropolitan Cape Town but within the WCHR

(e) PCGs outside metropolitan Cape Town and outside the WCHR but within South Africa

(f) African and non-African countries outside South Africa

(g) Financial assistance

APPENDIX VIa

Table A.5 Frequency and percentage of patients (N=932), controls (N=1 924) and the total student community (N=23 158) stratified by age (in years).

Age (in years)	n_1	$\%_1$	n_2	$\%_2$	n_3	$\%_3$
15	1	0,1	0	0,0	2	0,0
16	3	0,3	0	0,0	7	0,0
17	13	1,4	13	0,7	76	0,3
18	57	6,3	121	6,3	1 441	6,2
19	104	11,5	269	14,0	2 954	12,8
20	106	11,7	277	14,4	2 685	11,6
21	141	15,6	299	15,6	2 831	12,2
22	121	13,4	258	13,4	2 534	10,9
23	80	8,8	159	8,3	1 889	8,2
24	68	7,5	133	6,9	1 363	5,9
25	55	6,1	98	5,1	982	4,2
26	29	3,2	65	3,4	773	3,3
27	24	2,7	51	2,7	633	2,7
28	15	1,7	35	1,8	574	2,5
29	14	1,5	34	1,8	530	2,3
30	13	1,4	21	1,1	435	1,9
31	12	1,3	20	1,0	445	1,9
32	15	1,7	13	0,7	381	1,6
33	4	0,4	6	0,3	341	1,5
34	8	0,9	16	0,8	296	1,3
35	1	0,1	4	0,2	274	1,2
36	3	0,3	8	0,4	224	1,0
37	1	0,1	1	0,1	179	0,8
38	4	0,4	2	0,1	196	0,8
39	3	0,3	1	0,1	141	0,6
40	2	0,2	2	0,1	115	0,5
>40	8	0,9	13	0,7	856	3,7
Total	**905**	**100,0**	**1 919**	**100,0**	**23 157**	**100,0**

Number of missing responses = 27 for patients, 5 for controls and 1 for the total student community.

n_1 and $\%_1$ refer to patients.
n_2 and $\%_2$ refer to controls.
n_3 and $\%_3$ refer to the total student community.

There was a greater proportion of students of 21 years of age than any other age attending the UCT-SHS who do NOT present at the UCT-SHS-MHS (controls). This finding is not in keeping with the age-specific profile of the total student community where students of 19 years of age predominate but is in agreement with UCT-SHS-MHS attendees although there is minor variation between corresponding subcategories of age.

APPENDIX VIb

Table A.6 Frequency and percentage of patients (N=932), controls (N=1 924) and the total student community (N=23 158) stratified by level of study.

Level of degree/diploma	n_1	$\%_1$	n_2	$\%_2$	n_3	$\%_3$
Bachelors	732	80,9	1 596	83,2	14 471	62,5
Honours	55	6,1	102	5,3	1 920	8,3
Masters	46	5,1	82	4,3	2 669	11,5
Doctoral	6	0,7	31	1,6	761	3,3
General diploma	23	2,5	42	2,2	544	2,3
Advanced diploma	3	0,3	3	0,2	182	0,8
Postgraduate diploma	28	3,1	42	2,2	1 422	6,1
Other[1]	12	1,3	21	1,1	1 188	5,1
Total	**905**	**100,0**	**1 919**	**100,0**	**23 157**	**100,0**

Number of missing responses = 27 for patients, 5 for controls and 1 for the total student comments.
[1]This subcategory includes part-time students registered for single courses for non-degree purposes (NDP) and visiting foreign students.

There was a greater proportion of Bachelors level students than students registered for any other level of degree or diploma attending the UCT-SHS who do NOT present at the UCT-SHS-MHS (controls). This finding is in keeping with the level of study-specific profile of the total student community although there is considerable variation between corresponding subcategories of level of study and UCT-SHS-MHS attendees although this time there is minor variation between corresponding subcategories of level of study.

APPENDIX VIc

Table A.7 Frequency and percentage of patients (N=932), controls (N=1 924) and the total student community (N=23 158) stratified by year of study.

Year of study	n_1	$\%_1$	n_2	$\%_2$	n_3	$\%_3$
01	474	52,4	1 064	55,5	9 376	40,5
02	239	26,4	458	23,9	4 172	18,0
03	120	13,3	231	12,0	3 598	15,5
04	13	1,4	41	2,1	1 305	5,6
05	1	0,1	1	0,1	182	0,8
06	1	0,1	0	0,0	268	1,2
Other[1]	57	6,3	124	6,5	4 257	18,4
Total	**905**	**100,0**	**1 919**	**100,0**	**23 158**	**100,0**

Number of missing responses = 27 for patients and 5 for controls.
[1]This subcategory includes part-time students registered for single courses for non-degree purposes (NDP) and visiting foreign students as well as Masters and Doctoral degrees by dissertation only.

There was a greater proportion of first year students (freshmen/freshers) than students registered for any other year of study attending the UCT-SHS who do NOT present at the UCT-SHS-MHS (controls). This finding is in keeping with the year of study-specific profile of the total student community although there is considerable variation between corresponding subcategories of year of study and UCT-SHS-MHS attendees although this time there is minor variation between corresponding subcategories of year of study.

APPENDIX VId

Table A.8 Frequency and percentage of patients (N=23), controls (N=76) and the total student community (N=952) stratified by PCGs outside metropolitan Cape Town but within the WCHR.

PCG outside metropolitan Cape Town but within WCHR	n_1	$\%_1$	n_2	$\%_2$	n_3	$\%_3$
Code No. 7: George-Cape West Coast	9	39,1	25	32,9	199	20,9
Code No. 8: Robertson-Cape Mid Coast	0	0,0	2	2,6	14	1,5
Code No. 9: Ceres-Worcester-Ladismith	2	8,7	3	3,9	77	8,1
Code No. 10: Laingsburg-Beaufort West-De Aar	0	0,0	5	6,6	35	3,7
Code No. 11: Eerste Rivier-Grabouw-Bredasdorp	5	21,7	21	27,6	324	34,0
Code No. 12: Malmesbury-Citrusdal-Mamre	0	0,0	2	2,6	21	2,2
Code No. 13: Atlantis	0	0,0	2	2,6	5	0,5
Code No. 14: Hopefield-Vredenburg-Saldanha	0	0,0	1	1,3	39	4,1
Code No. 17: Stellenbosch-Paart-Franschhoek	7	30,4	15	19,7	238	25,0
Subtotal	**23**	**100,0**	**76**	**100,0**	**952**	**100,0**

Number of missing responses = Unknown for patients, controls and the total student community.

There was a greater proportion of students whose home address was within the George-Cape West Coast region than any other PCG outside metropolitan Cape Town but within the WCHR attending the UCT-SHS who do NOT present at the UCT-SHS-MHS (controls). This finding is not in keeping with the PCG-specific profile of the total student community where students whose home address was within the Eerste Rivier-Grabouw-Bredasdorp region predominate but is in agreement with UCT-SHS-MHS attendees although there is considerable variation between corresponding subcategories of PCGs outside metropolitan Cape Town but within the WCHR.

APPENDIX VIe

Table A.9 Frequency and percentage of patients (N=407), controls (N=1 056) and the total student community (N=6 692) stratified by PCGs outside metropolitan Cape Town and outside the WCHR but within South Africa.

PCG outside metropolitan Cape Town and outside WCHR but within SA and Namibia	n_1	$\%_1$	n_2	$\%_2$	n_3	$\%_3$
Code No. 1: Transvaal	234	57,5	571	54,1	3 577	53,5
Code No. 2: Natal	61	15,0	174	16,5	1 239	18,5
Code No. 3: Orange Free State	19	4,7	50	4,7	282	4,2
Code No. 5: East London-Ciskei-Tembu	50	12,3	142	13,4	720	10,8
Code No. 6: Port Elizabeth-Cape Midwest	35	8,6	90	8,5	668	10,0
Code No. 29: Lamberts Bay-Springbok-Alexander Bay	1	0,2	1	0,1	20	0,3
Code No. 30: Kimberley-Upington	7	1,7	28	2,7	186	2,8
Subtotal	**407**	**100,0**	**1 056**	**100,0**	**6 692**	**100,0**

Number of missing responses = Unknown for patients, controls and the total student community.

There was a greater proportion of students whose home address was within the Transvaal (former province) than any other PCG outside metropolitan Cape Town and outside the WCHR but within South Africa attending the UCT-SHS who do NOT present at the UCT-SHS-MHS (controls). This finding is in keeping with the PCG-specific profile of the total student community although there is considerable variation between corresponding subcategories of PCGs outside metropolitan Cape Town and outside the WCHR but within South Africa and UCT-SHS-MHS attendees although this time there is minor variation between corresponding subcategories of PCGs outside metropolitan Cape Town and outside the WCHR but within South Africa.

APPENDIX VIf

Table A.10 Frequency and percentage of patients (N=80), controls (N=261) and the total student community (N=2 336) stratified by African and non-African countries outside South Africa.

Country	n_1	$\%_1$	n_2	$\%_2$	n_3	$\%_3$
Kenya	21	26,3	67	25,7	1 318	56,4
Lesotho	1	1,3	4	1,5	18	0,8
Mauritius	6	7,5	15	5,7	79	3,4
Namibia	9	11,3	31	11,9	144	6,2
Swaziland	5	6,3	23	8,8	195	8,3
Zambia	6	7,5	11	4,2	72	3,1
Zimbabwe	2	2,5	2	0,8	14	0,6
Non-African countries	30	37,5	108	41,4	496	21,2
Subtotal	**80**	**100,0**	**261**	**100,0**	**2 336**	**100,0**

Number of missing responses = Unknown for patients and controls.

There was a greater proportion of students whose home address was in Zimbabwe than any other country outside South Africa attending the UCT-SHS who do NOT present at the UCT-SHS-MHS (controls). This finding is in keeping with the non-South African country-specific profile of the total student community although there is considerable variation between corresponding subcategories of countries outside South Africa and UCT-SHS-MHS attendees although, again, there is considerable variation (albeit to a lesser extent) between corresponding subcategories of countries outside South Africa.

APPENDIX VIg

Table A.11 Frequency and percentage of patients (N=932), controls (N=1 924) and the total student community (N=23 158) stratified by financial aid eligibility and value.

Financial aid eligibility and value	n_1	$\%_1$	n_2	$\%_2$	n_3	$\%_3$
<R5 000	70	7,7	208	10,8	1 743	7,5
R5 000-R9 999	115	12,7	236	12,3	982	4,2
R10 000-R14 999	32	3,5	57	3,0	264	1,1
≥R15 000	10	1,1	32	1,7	186	0,8
Ineligible/DNA[1]	678	74,9	1 386	72,2	19 983	86,3
Total	**905**	**100,0**	**1 919**	**100,0**	**23 158**	**100,0**

Number of missing responses = 27 for patients and 5 for controls.
[1]DNA = Did not apply for financial aid – the vast majority of these students would be ineligible for financial assistance as the availability of financial aid to financially disadvantaged students (who would qualify for financial aid) is widely advertised both on (and off) campus.

There was a greater proportion of students who were either assessed as being ineligible for UCT-administered financial aid or did not apply for it than students who received any of the designated value ranges of UCT-administered financial aid attending the UCT-SHS who do NOT present at the UCT-SHS-MHS (controls). This finding is in keeping with the UCT-administered financial aid value range-specific profile of the total student community although there is considerable variation between corresponding subcategories of the designated value ranges and UCT-SHS-MHS attendees although, this time, there is minor variation between corresponding subcategories of the designated value ranges.

APPENDIX VII

Objective-specific summary of intervariable results detailed in Chapter 5.

(a) Objective 1 (attendees)

(b) Objective 2 (patients versus controls)

(c) Objective 3 (patients versus the total student community)

(d) Objective 4 (mean number of consultations)

(e) Composite interobjective and intervariable summary

APPENDIX VIIa

Objective 1 (attendees)

(i) Patient-specific data

The following attendee-specific results were previously detailed in Chapter 5 for the selected demographic, academic, residential (home address) and financial assistance variables employed in the UCT-SHS study:

- Non-abridged and/or abridged (for age and residence (home address)-specific variables) format subcategories responsible for greater than 100 student attendees at the UCT-SHS-MHS during the study period were: (i) White female students (300); (ii) Social Science and Humanities faculty students (245); (iii) Arts faculty students (181); (iv) White male students (177); (v) African male students (149); (vi) students whose home address is within the Greater Rondebosch area (142); (vii) African female students (122); (viii) Science faculty students (107), and (ix) Commerce faculty students (106).
- Abridged/highly abridged (for age and residence (home address)-specific variables) format subcategories responsible for greater than 450 student attendees at the UCT-SHS-MHS during the study period were: (i) undergraduate students (755); (ii) students who are less than 25 years of age (694); (iii) students who are either ineligible for or not receiving UCT-administered financial aid (615); (iv) English first language speaking students (599); (v) female students (528); (vi) White students (477); (vii) first year (freshman/fresher) students (474), and (viii) non-Arts, Music and Social Science and Humanities faculty students (460). It must be noted that the variables of age and residence (home address), due to the use of three separate levels of analysis for this objective, appear in the highly abridged format.

(ii) Clinical/diagnostic-specific data

The following attendee-specific results were previously detailed in Chapter 5 for the selected demographic, academic, residential (home address) and financial assistance variables employed in the UCT-SHS study:

- The clinical/diagnostic-specific results were often in agreement with the patient-specific findings regarding the abridged/highly abridged (for age and residence (home address)-specific variables) format subcategory recording the higher number of attendees at the UCT-SHS-MHS during the study period. However, there were some exceptions: (i) anxiety (neurotic) disorder (tied), "other" disorders and academic problem as well as the selected "other" disorders of psychotic disorder, sexual disorder and substance abuse disorders for male students in the gender-specific variable; (ii) V-codes – including all the individual entities and anxiety (neurotic) disorder as well as the selected "other" disorders of psychotic disorder, sexual disorder and substance abuse disorders for Black (African Coloured and Indian) students in the race/population group-specific variable; (iii) affective disorder, adjustment disorder, V-codes, relationship problem, family problem, complicated bereavement and pre- and post termination counselling for unplanned/unwanted pregnancy for Black female versus Black male students in the combined race/population group and gender-specific variable; (iv) "other" disorders and academic problem for White male versus White female students in the combined race/population group and gender-specific variable; (v) affective disorder, "other" disorders, relationship problem and pre- and post termination counselling for unplanned/unwanted pregnancy for White male versus Black male students in the combined race/population group

and gender-specific variable; (vi) V-codes, family problem, academic problem and complicated bereavement for Black female versus White female students in the combined race/population group and gender-specific variable; (vii) anxiety (neurotic) disorder and academic problem for Black male versus White female students in the combined race/population group and gender-specific variable; (viii) "other" disorders and academic problem for White male versus Black female students in the combined race/population group and gender-specific variable; (ix) complicated bereavement (tied) and pre- and post termination counselling for unplanned/unwanted pregnancy for non-English first language speaking students in the language-specific variable; (x) affective disorder, adjustment disorder, V-codes, relationship problem and family problem (tied) for Arts, Music and Social Science and Humanities faculty students in the faculty-specific variable; (xi) affective disorder (tied), anxiety (neurotic) disorder and complicated bereavement for non-first (02 to 06) year students in the year of study-specific variable, and (xii) family problem (tied) for students whose home address is within metropolitan Cape Town in the residence (home address)-specific variable.

APPENDIX VIIb

Objective 2 (patients versus controls)

(i) Control-specific data

The following UCT-SHS attendee-specific results were previously detailed in Chapter 5 for the selected demographic, academic, residential (home address) and financial assistance variables employed in the UCT-SHS study:

- Non-abridged and/or abridged (for age and residence (home address)-specific variables) format subcategories responsible for greater than 250 student attendees at the UCT-SHS for medical complaints during the study period were: (i) White male students (591); (ii) White female students (449); (iii) Social Science and Humanities faculty students (409); (iv) African male students (403); (v) Commerce faculty students (320); (v) Engineering faculty students (313); (vii) Science faculty students (279), and (viii) African female students (253).
- Abridged/highly abridged (for age and residence (home address)-specific variables) format subcategories responsible for greater than 1 000 student attendees at the UCT-SHS for medical complaints during the study period were: (i) undergraduate students (1 638); (ii) students who are less than 25 years of age (1 529); (iii) students whose home address is outside metropolitan Cape Town (1 393); (iv) students who are either ineligible for or not receiving UCT-administered financial aid (1 386); (v) non-Arts, Music and Social Science and Humanities faculty students (1 247); (vi) English first language speaking students (1 173); (vii) male students (1 103); (viii) first year (freshman/fresher) students (1 064), and (ix) White students (1 040).

(ii) Unadjusted ORs

The following unadjusted ORs were previously detailed in Chapter 5 for the selected demographic, academic, residential (home address) and financial assistance variables employed in the UCT-SHS study: [ORs for the variables of race/population group, race/population group and gender combined, age and residence (home address) have been documented according to both conventional (one subcategory versus the remaining subcategories) and matrix (one subcategory versus another selected subcategory) formats.]

- On the one hand, non-abridged and/or abridged (for age and residence (home address)-specific variables) format subcategories responsible for statistically significant unadjusted ORs for students more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS during the study period were: (i) students who reside in PCGs outside metropolitan Cape Town but within the WCHR versus students whose home address is within PCGs outside metropolitan Cape Town and outside the WCHR but within South Africa (OR = 2,5); (ii) students whose home address is within metropolitan Cape Town (OR = 2,1); (iii) Coloured male versus White male students (OR = 2,0); (iv) Coloured female versus African female students (OR = 2,0); (v) Indian female versus African female students (OR = 2,0); (vi) students who reside within metropolitan Cape Town versus students whose home address is in PCGs outside metropolitan Cape Town and outside the WCHR but within South Africa (OR = 2,0); (vii) Arts faculty students (OR = 1,8); (viii) Coloured students (OR = 1,7); (ix) Coloured male students (OR = 1,7); (x) students who reside in Muizenberg-Ocean View (OR = 1,7); (xi) students who reside in African and non-

African countries outside South Africa versus students whose home address is within PCGs outside metropolitan Cape Town and outside the WCHR but within South Africa (OR = 1,7); (xii) Coloured female students (OR = 1,5); (xiii) Social Science and Humanities faculty students (OR = 1,4); (xiv) White female versus African female students (OR = 1,4), and (xv) English first language speaking students (OR = 1,3).

- On the other hand, non-abridged and/or abridged (for age and residence (home address)-specific variables) format subcategories responsible for statistically significant unadjusted ORs for students less likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS during the study period were: (i) students whose home address is within Langa (OR = 0,3); (ii) students who reside in Guguletu (OR = 0,4); (iii) students whose home address is within PCGs outside metropolitan Cape Town and outside the WCHR but within South Africa versus students who reside outside metropolitan Cape Town but within the WCHR (OR = 0,4); (iv) Coloured male versus White male students (OR = 0,5); (v) Coloured female versus African female students (OR = 0,5); (vi) Indian female versus African female students (OR = 0,5); (vii) students whose home address is within PCGs outside metropolitan Cape Town and outside the WCHR but within South Africa versus students who reside within metropolitan Cape Town (OR = 0,5); (viii) Engineering faculty students (OR = 0,6); (ix) students whose home address is within African and non-African countries outside South Africa (OR = 0,6); (x) students whose home address is within PCGs outside metropolitan Cape Town and outside the WCHR but within South Africa versus students who reside in African and non-African countries outside South Africa (OR = 0,6); (xi) African female students (OR = 0,7); (xii) African female versus White female students (OR = 0,7); (xiii) IsiXhosa first language speaking students (OR = 0,7); (xiv) Commerce faculty students (OR = 0,7); (xv) students who reside in PCGs outside metropolitan Cape Town and outside the WCHR but within South Africa (OR = 0,7); (xvi) African students (OR = 0,8); (xvii) White male students (OR = 0,8), and (xviii) students whose home address is within African and non-African countries outside South Africa versus students who reside within metropolitan Cape Town (OR = 0,8).
- Abridged/highly abridged (for age and residence (home address)-specific variables) format subcategories responsible for statistically significant unadjusted ORs for students more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than present with purely medical complaints at the UCT-SHS during the study period were: (i) White female versus White male students (OR = 2,2); (ii) Black (African, Coloured and Indian) female versus White male students (OR = 2,1); (ii) students whose home address is within metropolitan Cape Town versus students who reside outside of metropolitan Cape Town (OR = 2,1); (iv) female versus male students (OR = 1,9); (v) Arts, Music and Social Science and Humanities faculty versus non-Arts, Music and Social Science and Humanities faculty students (OR = 1,8); (vi) White female versus Black male students (OR = 1,7); (vii) Black female versus Black male students (OR = 1,6); (viii) Black male versus White male students (OR = 1,3), and (ix) English first language speaking versus non-English first language speaking students (OR = 1,3).

APPENDIX VIIc

Objective 3 (patients versus the total student community)

(i) Total student community-specific data

The following UCT total student community-specific results were previously detailed in Chapter 5 for the selected demographic, academic, residential (home address) and financial assistance variables employed in the UCT-SHS study:

- Non-abridged and/or abridged (for age and residence (home address)-specific variables) format subcategories responsible for greater than 2 500 student registrations at the University of Cape Town during the study period were: (i) White male students (9 096); (ii) White female students (6 701); (iii) Commerce faculty students (4 253); (iv) students whose home address is within the Greater Rondebosch area (3 944); (v) Social Science and Humanities faculty students (3 789); (vi) Medical faculty students (3 548); (vii) other (apart from the five listed) first language speaking students (2 636), and (viii) Engineering faculty students (2 621).
- Abridged/highly abridged (for age and residence (home address)-specific variables) format subcategories responsible for greater than 1 000 student registrations at the University of Cape Town during the study period were: (i) students who are either ineligible for or not receiving UCT-administered financial aid (19 983); (ii) English first language speaking students (17 686); (iii) non-Arts, Music and Social Science and Humanities faculty students (16 662); (iv) White students (15 798); (v) students who are less than 25 years of age (15 782); (vi) undergraduate students (15 015); (vii) male students (13 450), and (viii) students whose home address is within metropolitan Cape Town (13 177).

(ii) Unadjusted ORs

The following unadjusted ORs were previously detailed in Chapter 5 for the selected demographic, academic, residential (home address) and financial assistance variables employed in the UCT-SHS study: [ORs for the variables of race/population group, race/population group and gender combined, age and residence (home address) have been documented according to both conventional (one subcategory versus the remaining subcategories) and matrix (one subcategory versus another selected subcategory) formats.]

- On the one hand, non-abridged and/or abridged (for age and residence (home address)-specific variables) format subcategories responsible for statistically significant unadjusted ORs for students more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than their representation of the student community would suggest during the study period were: (i) students whose home address is within Nyanga East (OR = 3,5); (ii) African male students (OR = 3,4); (iii) African male versus Coloured male students (OR = 3,3); (iv) SeTswana first language speaking students (OR = 2,7); (v) African students (OR = 2,6); (vi) African female students (OR = 2,5); (vii) African male versus Coloured male students (OR = 2,5); (viii) African male versus Indian male students (OR = 2,5); (ix) African female versus White female students (OR = 2,5), (x) students who reside outside metropolitan Cape Town but within the WCHR versus students whose home address is within metropolitan Cape Town (OR = 2,5); (xi) students whose home address is within African and non-African countries outside South Africa versus students whose home address is within metropolitan Cape Town (OR

= 2,5); (xii) Arts faculty students (OR = 2,4); (xiii) SeSotho first language speaking students (OR = 2,3); (xiv) African female versus Coloured female students (OR = 2,0); (xv) African female versus Indian female students (OR = 2,0); (xvi) IsiZulu first language speaking students (OR = 2,0); (xvii) Social Science and Humanities faculty students (OR = 2,0); (xviii) students residing in PCGs outside metropolitan Cape Town and outside the WCHR but within South Africa (OR = 2,0); (xix) students who reside in African and non-African countries outside South Africa versus students whose home address is within metropolitan Cape Town (OR = 2,0); (xx) IsiXhosa first language speaking students (OR = 1,8); (xxi) 20-24 year old versus greater than or equal to 25 year old students (OR = 1,6); (xxii) 20-24 year old students (OR = 1,4); (xx) 15-19 year old versus greater than or equal to 25 year old students (OR = 1,4), and (xxiii) students whose home address is within the Greater Rondebosch area (OR = 1,3).

- On the other hand, non-abridged and/or abridged (for age and residence (home address)-specific variables) format subcategories responsible for statistically significant unadjusted ORs for students less likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than their representation of the student community would suggest during the study period were: (i) Medical faculty students (OR = 0,3); (ii) White male versus African male students (OR = 0 ,3); (iii) White male students (OR = 0,4); (iv) Coloured male versus African male students (OR = 0,4); (v) Indian male versus African male students (OR = 0,4); (vi) White female versus African female students (OR = 0,4); (vii) English first language speaking students (OR = 0,4); (viii) students whose home address is within Parow-Blackheath (OR = 0,4); (ix) students whose home address is within metropolitan Cape Town versus students who reside outside metropolitan Cape Town but within the WCHR (OR = 0,4); (x) students whose home address is within metropolitan Cape Town versus students who reside in African and non-African countries outside South Africa (OR = 0,4); (xi) White students (OR = 0,5); (xii) students who reside in the Greater Wynberg area (OR = 0,5); (xiii) students whose home address is within metropolitan Cape Town versus students who reside outside metropolitan Cape Town and outside the WCHR but within South Africa (OR = 0,5); (xiv) White female students (OR = 0,6); (xv) students greater than or equal to 25 years of age (OR = 0,6); (xvi) students greater than or equal to 25 years of age versus 20-24 year old students (OR = 0,6); (xvii) Commerce faculty students (OR = 0,6); (xviii) Education faculty students (OR = 0,6); (xix) Law faculty students (OR = 0,6); (xx) students whose home address is within metropolitan Cape Town (OR = 0,6); (xxi) students who reside in PCGs outside metropolitan Cape Town but within the WCHR (OR = 0,6), and (xxii) students greater than or equal to 25 year of age versus 15-19 year old students (OR = 0,7).
- Abridged/highly abridged (for age and residence (home address)-specific variables) format subcategories responsible for statistically significant unadjusted ORs for students more likely to seek evaluation and/or therapeutic intervention for psychological or psychiatric complaints at the UCT-SHS-MHS than their representation of the student community would suggest during the study period were: (i) Black (African, Coloured and Indian) female versus White male students (OR = 4,1); (ii) students who are receiving UCT-administered financial aid versus students who are either ineligible for or not receiving UCT-administered financial aid (OR = 3,3); (iii) Arts, Music and Social Science and Humanities faculty versus non-Arts, Social Science and Humanities faculty students (OR = 2,6); (iv) undergraduate versus postgraduate students (OR = 2,6); (v) White female versus White male students (OR = 2,4); (vi) Black male versus White male students (OR = 2,4); (vii) female versus male students (OR = 2,0); (viii) Black versus White students (OR = 2,0); (ix) Black female versus White female students (OR = 1,8); (x) Black female versus Black male students (OR = 1,7); (xi) non-English first language speaking versus English first language speaking students (OR = 1,7); (xii) students whose home address is outside metropolitan Cape Town versus students who reside within metropolitan Cape Town (OR = 1,7); (xiii) students who are less than 25 years of

age versus students who are greater than or equal to 25 years of age (OR = 1,6), and (xiv) first year (freshman/fresher) versus non-first (02 to 06) year students (OR = 1,3).

(iii) Usage/utilisation (prevalence) rates

A: Patient-specific data

The following usage/utilisation rates per 1 000 students were previously detailed in Chapter 5 for the selected demographic, academic, residential (home address) and financial assistance variables employed in the UCT-SHS study:

- Non-abridged and/or abridged (for age and residence (home address)-specific variables) format subcategories responsible for a usage/utilisation rate greater than 75 per 1 000 students at the UCT-SHS-MHS during the study period were: (i) 15 year old students (500,0); (ii) 16 year old students (428,6); (iii) 17 year old students (171,1); (iv) students who reside in Zambia (142,9); (v) African female students (109,6); (vi) SeTswana first language speaking students (98,1); (vii) students whose home address is within Nyanga East (96,8); (viii) SeSotho first language speaking students (85,8); (ix) students who reside in Swaziland (83,3); (x) Arts faculty students (79,0); (xi) students whose home address is within Lesotho (75,9), and (xii) IsiZulu first language speaking students (75,8).
- Abridged and/or highly abridged (for age and residence (home address)-specific variables) format subcategories responsible for a usage/utilisation rate greater than 50 per 1 000 students at the UCT-SHS-MHS during the study period were: (i) students who are receiving UCT-administered financial aid (100,3); (ii) Arts, Music and Social Science and Humanities faculty students (80,1); (iii) Black (African, Coloured and Indian) female students (75,9); (iv) Black male students (58,2); (v) non-English first language speaking students (55,9); (vi) female students (54,4); (vii) students whose home address is outside metropolitan Cape Town (51,1), and (viii) undergraduate students (50,3).

B: Clinical/diagnostic-specific data

The following usage/utilisation (prevalence) rate results were previously detailed in Chapter 5 for the selected demographic, academic, residential (home address) and financial assistance variables employed in the UCT-SHS study:

- The clinical/diagnostic-specific results were often in agreement with the patient-specific findings regarding the abridged/highly-abridged (for age and residence (home address)-specific variables) format Research Hypothesis-specific subcategory recording the higher usage/utilisation rate per 1 000 students at the UCT-SHS-MHS during the study period. However, there were some exceptions: (i) "other" disorders and academic problem as well as the selected "other" disorders of psychotic disorder, sexual disorder and substance abuse disorders for male students in the gender-specific variable; (ii) the selected "other" disorders of personality/character disorder and eating disorders for White students in the race/population group-specific variable; (iii) "other" disorders and academic problem for Black male versus Black female students in the combined race/population group and gender-specific variable; (iv) academic problem for White male versus White female students in the combined race/population group and gender-specific variable; (v) "other" disorder for White female versus Black female students in the

combined race/population group and gender-specific variable; (vi) anxiety (neurotic) disorder, "other" disorders, complicated bereavement and academic problem for Black male versus White female students in the combined race/population group and gender-specific variable; (vii) "other" disorders and academic problem for White male versus Black female students in the combined race/population group and gender-specific variable; (viii) academic problem and complicated bereavement for students greater than or equal to 25 years of age in the age-specific variable; (ix) family problem for English first language speaking students in the language-specific variable, and (x) anxiety (neurotic) disorder and complicated bereavement for non-first (02 to 06) year students in the year of study-specific variable.

APPENDIX VIId

Objective 4 (mean number of consultations)

The following mean number of consultation-specific results were previously detailed in Chapter 5 for the selected demographic, academic, residential (home address) and financial assistance variables employed in the UCT-SHS study:

- Non-abridged and/or abridged (for age and residence (home address)-specific variables) format subcategories responsible for a mean number of consultations greater than or equal to 4,6 per student at the UCT-SHS-MHS during the study period were: (i) students whose home address is within the Lamberts Bay-Springbok-Alexander Bay region (10,0); (ii) students who reside in Nyanga East (6,3); (iii) students who are receiving greater than or equal to R15 000 of UCT-administered financial aid (6,1); (iv) fifth year students (6,0); (v) students who live in Stellenbosch-Paarl-Franschhoek (6,0); (vi) students whose home address is within Langa (5,7); (vii) Masters degree students (5,0); (viii) students who reside in Observatory-Woodstock (5,0); (ix) students who live in African and non-African countries outside South Africa (4,8), and (x) Fine Art and Architecture faculty students (4,6).
- Abridged and/or highly abridged (for age and residence (home address)-specific variables) format subcategories responsible for a mean number of consultations greater than or equal to 4,0 per student at the UCT-SHS-MHS during the study period were: (i) White female students (4,3); (ii) female students (4,1); (iii) White students (4,0); (iv) students who are greater than or equal to 25 years of age (4,0); (v) Arts, Music and Social Science and Humanities faculty students (4,0), and (vi) postgraduate students (4,0).

APPENDIX VIIe

Table A.12 Composite interobjective and intervariable summary

Variable	Patients (n_1)	Controls (n_2)	Patients versus controls – Most significant variable subcategory	Total student community (n_3)	Patients versus total student community – Most significant variable subcategory	Usage/utilisation rate per 1 000 students	Mean number of consultations per student
Gender	Females	Males	Females: OR=1,9; p = 0,000	Males	Females: OR=2,0; p=0,000	Females	Females
Race/population group							
– Non-abridged	Whites	Whites	Coloureds: OR=0,6; p = 0,000	Whites	Africans: OR=2,6; p=0,000	Africans	Coloureds
– Abridged	Whites	Whites	Blacks: OR=1,1; p=0,459	Whites	Blacks: OR-2,0; p=0,000	Blacks	Whites
Race/population group and gender							
– Non-abridged	White females	White males	Not performed	White males	Not performed	African females	Coloured males
– Abridged	White females	White males	Black females: OR=2,2; p=0,000	White males	Black females: OR=2,4; p=0,000	Black females	White females
Age (in years)							
– Non-abridged.	21	21	Not performed	19	Not performed	17[4]	N/A
– Abridged	20-24	20-24	≥25: OR=0,8; p = 0,069	20-24	≥25: OR=1,6; p=0,000	20-24	≥25
– Highly abridged	<25	<25	<25: OR=1,3; p=0,060	<25	<25: OR=1,6; p=0,000	<25	≥25
Language							
– Non-abridged.	IsiXhosa[2]	IsiXhosa[2]	IsiXhosa: OR=0,7; p=0,020[2]	IsiXhosa[2]	SeTswana: OR=2,7; p=0,000[2]	SeTswana	SeSotho
– Abridged	English	English	English: OR=1,2; p=0,009	English	Non-English: OR=1,7; p=0,000	Non-English	English
Faculty							
– Non-abridged	Social Science and Humanities	Social Science and Humanities	Arts: OR=1,8; p=0,000	Commerce	Arts: OR=2,4; p=0,000	Arts	Fine Art and Architecture
– Abridged	Non-Arts, Music and Social Science and Humanities faculties	Non-Arts, Music and Social Science and Humanities faculties	Arts, Music and Social Science and Humanities faculties: OR=1,8; p=0,000	Non-Arts, Music and Social Science and Humanities faculties	Arts, Music and Social Science and Humanities faculties: OR=2,6; p=0,000	Arts, Music and Social Science and Humanities faculties	Arts, Music and Social Science and Humanities faculties
Level of study							
– Non-abridged	Bachelors	Bachelors	Not performed	Bachelors	Not performed	Bachelors	Masters
– Abridged	Undergraduate	Undergraduate	Postgraduate: OR=1,2; p=0,216	Undergraduate	Undergraduate: OR=2,6; p=0,000	Undergraduate	Postgraduate
Year of study.							
– Non-abridged	02[3]	02[3]	Not performed	02[3]	Not performed	02[3]	02[4]
– Abridged	01	01	02 to 06: OR=1,1; p=0,100	02 to 06	01: OR=1,3; p=0,000	01	01

Variable	Patients (n_1)	Controls (n_2)	Patients versus controls – Most significant variable subcategory	Total student community (n_3)	Patients versus total student community – Most significant variable subcategory	Usage/utilisation rate per 1 000 students	Mean number of consultations per student
Home address							
– metropolitan CT	Greater-Rondebosch	Greater Rondebosch	Muizenberg-Ocean View: OR=1,7; p=0,020	Greater Rondebosch	Parow-Blackheath: OR=0,4; p=0,002	Nyanga East	Nyanga East
– WCHR	George-Cape West Coast	George-Cape West Coast	Not performed	Eerste Rivier-Grabouw-Bredasdorp	Not performed	George-Cape West Coast	Stellenbosch-Paarl-Franschhoek
– South Africa	Transvaal	Transvaal	Not performed	Transvaal	Not performed	East London-Ciskei-Tembu	Port Elizabeth-Cape Midwest[5]
– Outside SA	Zimbabwe	Zimbabwe	Not performed	Non-African countries	Not performed	Swaziland[6]	Not performed
– Abridged	Outside metropolitan Cape Town and outside WCHR but within S. Africa	Outside metropolitan Cape Town and outside WCHR but within S. Africa	Within metro. Cape Town: OR=2,1; p=0,000	Within metro. Cape Town	Outside metro. Cape Town and outside WCHR but within South Africa: OR=2,0; p=0,000	Outside metro. Cape Town and outside WCHR but within South Africa	African and non-African countries outside South Africa
– Highly abridged.	Outside metropolitan Cape Town	Outside metropolitan Cape Town	Within metro. Cape Town: OR=2,1; p=0,000	Within metro. Cape Town	Outside metro. Cape Town: OR=1,7; p=0,000	Outside metro. Cape Town	Outside metro. Cape Town
Financial Aid Status							
– Non-abridged	<R5 000[7]	R5 000-R9 999[7]	Not performed	<R5 000[7]	Not performed	R10 000-R14 999[7]	≥R15 000
– Abridged	Ineligible/DNA	Ineligible/DNA	Eligible: OR=1,1; p=0,177	Ineligible/DNA	Eligible: OR=3,3; p=0,000	Eligible	Ineligible/DNA

[1]This format does not include students of 15 or 16 years of age, as there were less than 30 students in this subcategory attending the University of Cape Town from 1991 to 1993.
[2]This format does not include English first language speaking students.
[3]This format does not include first year (freshman/fresher) students.
[4]This format does not include 05 (fifth) year students, as there were less than three students in this subcategory attending the UCT-SHS-MHS from 1991 to 1993.
[5]This format does not include Lamberts Bay-Springbok-Alexander Bay as there were less than three students in this subcategory attending the UCT-SHS-MHS from 1991 to 1993.
[6]This format does not include students whose home address was in Zambia, as there were less than 30 students in this subcategory attending the University of Cape Town from 1991 to 1993.
[7]This format does not include students who were either ineligible for, not receiving or did not apply for UCT-administered financial aid.

Note: The individual intervariable patient (n_1) (column 2), control (n_2) (column 3), total student community (n_3) (column 5), usage/utilisation rate per 1 000 students (column 7) and mean number of consultations (column 8)-specific entries relate to the non-abridged, abridged and highly abridged (for age and residence (home address)-specific variables) format subcategory recording the highest ordinal value. The individual intervariable patients versus controls (column 4) and patients versus the total student community (column 6) entries relate to the non-abridged, abridged and highly abridged (where relevant) format subcategory recording the most statistically significant value as measured by the lowest p-value.

APPENDIX VIII

Logistic regression analyses – additional results for controls (Objective 2) and the total student community (Objective 3) for clinical/diagnostic-specific data relating to the various selected demographic, academic, residential (home address) and financial assistance variables to complement findings for the patient-specific data appearing in section 5.2.

(a) Major Diagnostic Categories

(b) Individual V-codes

(c) Summary

Supporting commentary is provided concerning variables that record an altered level of statistical significance (either newly statistically significant or no longer statistically significant) to those previously reported for the patient-specific data for UCT-SHS-MHS attendees (refer to Table 5.190 for Objective 2-specific findings and Table 5.191 for Objective 3-specific results).

APPENDIX VIIIa

Major Diagnostic categories

(i) Affective disorder

A: Objective 2 (patients versus controls)

Table A.13 demonstrates that the following variables stratified by students presenting at the UCT-SHS-MHS with affective disorder record an altered level of statistical significance (either newly statistically significant or no longer statistically significant) to that previously reported in Table 5.190 which details Objective 2-specific findings for the patient-specific data for UCT-SHS-MHS attendees:

No entries.

Table A.13 Logistic regression analysis for UCT-SHS-MHS attendance versus UCT-SHS attendance without UCT-SHS-MHS attendance for students presenting with affective disorders.

Variable and subcategory	SE	Adjusted OR (with 95% CI)	Df	χ^2	p
Intercept	0,441	-	1	19,4	$0,000^{Sig}$
Gender	0,101	1,7 (1,4 – 2,0)	1	26,1	$0,000^{Sig}$
Race/population group[1]					
Africans	0,278	0,9 (0,5 – 1,6)	1	0,1	$0,728^{NS}$
Coloureds	0,291	0,9 (0,5 – 1,6)	1	0,2	$0,667^{NS}$
Whites	0,261	0,8 (0,5 – 1,3)	1	1,2	$0,281^{NS}$
Age	0,134	3,2 (0,9 – 11,2)	1	3,3	$0,071^{NS}$
Language	0,105	1,3 (1,1 – 1,6)	1	6,8	$0,009^{Sig}$
Faculty	0,103	1,5 (1,2 – 1,8)	1	13,6	$0,000^{Sig}$
Level of study	0,226	1,0 (0,6 – 1,5)	1	0,0	$0,867^{NS}$
Year of study	0,138	1,0 (0,8 – 1,3)	1	0,0	$0,913^{NS}$
Residence (home address)					
mCT[2]	0,179	2,0 (1,4 – 2,8)	1	15,3	$0,000^{Sig}$
WCHR[3]	0,336	0,8 (0,4 – 1,5)	1	0,6	$0,438^{NS}$
SA[4]	0,173	1,2 (0,8 – 1,7)	1	0,9	$0,338^{NS}$
Financial assistance	0,126	1,0 (0,7 – 1,2)	1	0,1	$0,734^{NS}$
Total	-	-	13	109,0	$0,000^{Sig}$

Maximum likelihood = 1215,35.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
[2]Within metropolitan Cape Town.
[3]Outside metropolitan Cape Town but within WCHR.
[4]Outside metropolitan Cape Town and outside WCHR but within South Africa.

B: Objective 3 (patients versus the total student community)

Table A.14 demonstrates that the following variables stratified by students presenting at the UCT-SHS-MHS with affective disorder record an altered level of statistical significance (either newly statistically significant or no longer statistically significant) to that previously reported in Table 5.191 which details Objective 3-specific findings for the patient-specific data for UCT-SHS-MHS attendees:

No entries.

Table A.14 Logistic regression analysis for UCT-SHS-MHS attendance versus UCT-registration without UCT-SHS-MHS attendance for students presenting with affective disorders.

Variable and subcategory	SE	Adjusted OR (with 95% CI)	Df	χ^2	p
Intercept	0,343	-	1	106,7	$0,000^{Sig}$
Gender	0,085	1,9 (1,6 – 2,2)	1	55,8	$0,000^{Sig}$
Race/population group[1]					
Africans	0,228	1,2 (0,8 – 2,0)	1	1,0	$0,328^{NS}$
Coloureds	0,230	0,7 (0,5 – 1,2)	1	1,6	$0,207^{NS}$
Whites	0,209	0,9 (0,6 – 1,3)	1	0,5	$0,489^{NS}$
Age	0,009	1,3 (0,4 – 4,1)	1	0,2	$0,690^{NS}$
Language	0,088	1,1 (1,0 – 1,4)	1	2,4	$0,121^{NS}$
Faculty	0,085	1,8 (1,5 – 2,1)	1	46,1	$0,000^{Sig}$
Level of study	0,164	1,7 (1,3 – 2,4)	1	11,5	$0,000^{Sig}$
Year of study	0,098	0,6 (0,5 – 0,7)	1	31,4	$0,000^{Sig}$
Residence (home address)					
mCT[2]	0,150	0,7 (0,5 – 0,9)	1	5,9	$0,015^{Sig}$
WCHR[3]	0,297	0,6 (0,3 – 1,0)	1	3,5	$0,063^{NS}$
SA[4]	0,153	1,2 (0,9 – 1,6)	1	1,1	$0,305^{NS}$
Financial assistance	0,106	2,1 (1,7 – 2,5)	1	46,0	$0,000^{Sig}$
Total	-	-	13	366,6	$0,000^{Sig}$

Maximum likelihood = 2467,28.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
[2]Within metropolitan Cape Town.
[3]Outside metropolitan Cape Town but within WCHR.
[4]Outside metropolitan Cape Town and outside WCHR but within South Africa.

(ii) Adjustment disorder

A: Objective 2 (patients versus controls)

Table A.15 demonstrates that the following variables stratified by students presenting at the UCT-SHS-MHS with adjustment disorders record an altered level of statistical significance (either newly statistically significant or no longer statistically significant) to that previously reported in Table 5.190 which details Objective 2-specific findings for the patient-specific data for UCT-SHS-MHS attendees:

- The relationship between language (English first language speaking students) and presentation at the UCT-SHS-MHS is no longer statistically significant.

Table A.15 Logistic regression analysis for UCT-SHS-MHS attendance versus UCT-SHS attendance without UCT-SHS-MHS attendance for students presenting with adjustment disorders.

Variable and subcategory	SE	Adjusted OR (with 95% CI)	Df	χ^2	ρ
Intercept	0,675	-	1	25,3	$0,000^{Sig}$
Gender	0,163	2,0 (1,4 – 2,7)	1	16,9	$0,000^{Sig}$
Race/population group[1]					
Africans	0,436	0,6 (0,2 – 1,4)	1	1,5	$0,215^{NS}$
Coloureds	0,438	0,9 (0,4 – 2,0)	1	0,1	$0,725^{NS}$
Whites	0,398	0,8 (0,4 – 1,7)	1	0,4	$0,510^{NS}$
Age	0,019	4,0 (0,7 – 22,9)	1	2,4	$0,123^{NS}$
Language	0,178	1,2 (0,9 – 1,8)	1	1,5	$0,222^{NS}$
Faculty	0,162	1,7 (1,2 – 2,3)	1	10,7	$0,001^{Sig}$
Level of study	0,330	0,8 (0,4 – 1,5)	1	0,5	$0,482^{NS}$
Year of study	0,201	1,1 (0,7 – 1,6)	1	0,2	$0,632^{NS}$
Residence (home address)					
mCT[2]	0,310	2,4 (1,3 – 4,5)	1	8,4	$0,004^{Sig}$
WCHR[3]	0,573	1,0 (0,3 – 3,0)	1	0,0	$0,985^{NS}$
SA[4]	0,305	1,6 (0,9 – 2,9)	1	2,4	$0,124^{NS}$
Financial assistance	0,199	1,2 (0,8 – 1,7)	1	0,5	$0,473^{NS}$
Total	-	-	13	68,7	$0,000^{Sig}$

Maximum likelihood = 566,99.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
[2]Within metropolitan Cape Town.
[3]Outside metropolitan Cape Town but within WCHR.
[4]Outside metropolitan Cape Town and outside WCHR but within South Africa.

B: Objective 3 (patients versus the total student community)

Table A.16 demonstrates that the following variables stratified by students presenting at the UCT-SHS-MHS with adjustment disorder record an altered level of statistical significance (either newly statistically significant or no longer statistically significant) to that previously reported in Table 5.191 which details Objective 3-specific findings for the patient-specific data for UCT-SHS-MHS attendees:

- The relationship between level of study (undergraduate students) and presentation at the UCT-SHS-MHS is no longer statistically significant.
- The relationship between students resident in metropolitan Cape Town and presentation at the UCT-SHS-MHS is no longer statistically significant.

Table A.16 Logistic regression analysis for UCT-SHS-MHS attendance versus UCT-registration without UCT-SHS-MHS attendance for students presenting with adjustment disorders.

Variable and subcategory	SE	Adjusted OR (with 95% CI)	Df	χ^2	p
Intercept	0,592	-	1	73,5	0,000^{Sig}
Gender	0,152	2,1 (1,6 – 2,9)	1	25,4	0,000^{Sig}
Race/population group[1]					
Africans	0,414	0,8 (0,3 – 1,8)	1	0,3	0,554^{NS}
Coloureds	0,408	0,7 (0,3 – 1,7)	1	0,5	0,479^{NS}
Whites	0,379	0,9 (0,4 – 1,8)	1	0,1	0,727^{NS}
Age	0,138	2,3 (0,4 – 14,7)	1	0,8	0,362^{NS}
Language	0,163	1,1 (0,8 – 1,5)	1	0,3	0,600^{NS}
Faculty	0,150	2,1 (1,6 – 2,8)	1	24,8	0,000^{Sig}
Level of study	0,289	1,5 (0,8 – 2,6)	1	1,8	0,182^{NS}
Year of study	0,170	0,6 (0,4 – 0,9)	1	8,1	0,004^{Sig}
Residence (home address)					
mCT[2]	0,289	0,8 (0,5 – 1,5)	1	0,4	0,505^{NS}
WCHR[3]	0,525	0,8 (0,3 – 2,1)	1	0,3	0,593^{NS}
SA[4]	0,293	1,6 (0,9 – 2,8)	1	2,6	0,109^{NS}
Financial assistance	0,187	2,6 (1,8 – 3,7)	1	25,8	0,000^{Sig}
Total	-	-	13	138,0	0,000^{Sig}

Maximum likelihood = 981,61.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
[2]Within metropolitan Cape Town.
[3]Outside metropolitan Cape Town but within WCHR.
[4]Outside metropolitan Cape Town and outside WCHR but within South Africa.

(iii) V-codes

A: Objective 2 (patients versus controls)

Table A.17 demonstrates that the following variables stratified by students presenting at the UCT-SHS-MHS with V-codes record an altered level of statistical significance (either newly statistically significant or no longer statistically significant) to that previously reported in Table 5.190 which details Objective 2-specific findings for the patient-specific data for UCT-SHS-MHS attendees:

- The relationship between language (English first language speaking students) and presentation at the UCT-SHS-MHS is no longer statistically significant.
- The relationship between faculty (Arts, Music and Social Science and Humanities faculty students) and presentation at the UCT-SHS-MHS is no longer statistically significant.

Table A.17 Logistic regression analysis for UCT-SHS-MHS attendance versus UCT-SHS attendance without UCT-SHS-MHS attendance for students presenting with V-codes.

Variable and subcategory	SE	Adjusted OR (with 95% CI)	Df	χ^2	ρ
Intercept	0,771	-	1	17,5	$0,000^{Sig}$
Gender	0,180	2,6 (1,8 – 3,4)	1	38,0	$0,000^{Sig}$
Race/population group[1]					
Africans	0,492	1,1 (0,4 – 2,9)	1	0,1	$0,822^{NS}$
Coloureds	0,500	1,3 (0,5 – 3,4)	1	0,2	$0,622^{NS}$
Whites	0,466	0,7 (0,3 – 1,9)	1	0,4	$0,528^{NS}$
Age	0,022	2,3 (0,3 – 18,3)	1	0,7	$0,415^{NS}$
Language	0,178	1,2 (0,9 – 1,7)	1	1,4	$0,241^{NS}$
Faculty	0,175	1,3 (1,0 – 1,9)	1	2,8	$0,092^{NS}$
Level of study	0,389	0,6 (0,3 – 1,2)	1	2,1	$0,138^{NS}$
Year of study	0,239	1,2 (0,8 – 1,9)	1	0,6	$0,430^{NS}$
Residence (home address)					
mCT[2]	0,339	2,5 (1,3 – 4,9)	1	7,3	$0,007^{Sig}$
WCHR[3]	1,061	0,2 (0,0 – 1,9)	1	1,8	$0,175^{NS}$
SA[4]	0,332	1,5 (0,8 – 2,9)	1	1,6	$0,200^{NS}$
Financial assistance	0,921	1,0 (0,8 – 1,2)	1	0,0	$0,990^{NS}$
Total	-	-	13	72,2	$0,000^{Sig}$

Maximum likelihood = 494,07.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
[2]Within metropolitan Cape Town.
[3]Outside metropolitan Cape Town but within WCHR.
[4]Outside metropolitan Cape Town and outside WCHR but within South Africa.

B: Objective 3 (patients versus the total student community)

Table A.18 demonstrates that the following variables stratified by students presenting at the UCT-SHS-MHS with V-codes record an altered level of statistical significance (either newly statistically significant or no longer statistically significant) to that previously reported in Table 5.191 which details Objective 3-specific findings for the patient-specific data for UCT-SHS-MHS attendees:

- The relationship between level of study (undergraduate students) and presentation at the UCT-SHS-MHS is no longer statistically significant
- The relationship between year of study (first year (freshman/fresher) students) and presentation at the UCT-SHS-MHS is no longer statistically significant
- The relationship between students resident in metropolitan Cape Town and presentation at the UCT-SHS-MHS is no longer statistically significant

Table A.18 Logistic regression analysis for UCT-SHS-MHS attendance versus UCT-registration without UCT-SHS-MHS attendance for students presenting with V-codes.

Variable and subcategory	SE	Adjusted OR (with 95% CI)	Df	χ^2	p
Intercept	0,717	-	1	47,4	$0,000^{Sig}$
Gender	0,171	3,0 (2,1 – 4,2)	1	40,7	$0,000^{Sig}$
Race/population group[1]					
Africans	0,477	1,7 (0,7 – 4,2)	1	1,1	$0,284^{NS}$
Coloureds	0,482	1,1 (0,4 – 2,9)	1	0,1	$0,806^{NS}$
Whites	0,455	0,9 (0,4 – 2,1)	1	0,1	$0,733^{NS}$
Age	0,017	0,8 (0,1 – 8,3)	1	0,0	$0,860^{NS}$
Language	0,169	1,1 (0,8 – 1,5)	1	0,2	$0,622^{NS}$
Faculty	0,164	1,6 (1,2 – 2,2)	1	8,1	$0,004^{Sig}$
Level of study	0,388	1,1 (0,5 – 2,3)	1	0,0	$0,835^{NS}$
Year of study	0,221	0,7 (0,4 – 1,0)	1	3,4	$0,065^{NS}$
Residence (home address)					
mCT[2]	0,332	0,9 (0,5 – 1,7)	1	0,1	$0,761^{NS}$
WCHR[3]	1,048	0,2 (0,0 – 1,6)	1	2,3	$0,127^{NS}$
SA[4]	0,336	1,6 (0,8 – 3,0)	1	1,7	$0,191^{NS}$
Financial assistance	0,196	2,2 (1,5 – 3,2)	1	15,7	$0,000^{Sig}$
Total	-	-	13	158,8	$0,000^{Sig}$

Maximum likelihood = 826,89.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
[2]Within metropolitan Cape Town.
[3]Outside metropolitan Cape Town but within WCHR.
[4]Outside metropolitan Cape Town and outside WCHR but within South Africa.

(iv) Anxiety (neurotic) disorder

A: Objective 2 (patients versus controls)

Table A.19 demonstrates that the following variables stratified by students presenting at the UCT-SHS-MHS with anxiety (neurotic) disorders record an altered level of statistical significance (either newly statistically significant or no longer statistically significant) to that previously reported in Table 5.190 which details Objective 2-specific findings for the patient-specific data for UCT-SHS-MHS attendees:

- The relationship between gender (female students) and presentation at the UCT-SHS-MHS is no longer statistically significant.
- The relationship between White students and presentation at the UCT-SHS-MHS is now statistically significant.
- The relationship between language (English first language speaking students) and presentation at the UCT-SHS-MHS is no longer statistically significant.

Table A.19 Logistic regression analysis for UCT-SHS-MHS attendance versus UCT-SHS attendance without UCT-SHS-MHS attendance for students presenting with anxiety (neurotic) disorders.

Variable and subcategory	SE	Adjusted OR (with 95% CI)	Df	χ^2	ρ
Intercept	0,679	-	1	21,5	$0,000^{Sig}$
Gender	0,175	1,4 (1,0 – 1,9)	1	3,4	$0,067^{NS}$
Race/population group[1]					
Africans	0,406	0,6 (0,3 – 1,2)	1	2,1	$0,149^{NS}$
Coloureds	0,433	0,5 (0,2 – 1,2)	1	2,3	$0,129^{NS}$
Whites	0,372	0,4 (0,2 – 0,8)	1	6,1	$0,013^{Sig}$
Age	0,020	4,7 (0,7 – 31,0)	1	2,5	$0,111^{NS}$
Language	0,180	1,2 (0,9 – 1,8)	1	1,5	$0,220^{NS}$
Faculty	0,180	1,4 (1,0 – 2,0)	1	3,9	$0,049^{Sig}$
Level of study	0,356	1,4 (0,7 – 2,9)	1	1,0	$0,310^{NS}$
Year of study	0,226	0,9 (0,6 – 1,4)	1	0,3	$0,593^{NS}$
Residence (home address)					
mCT[2]	0,316	1,9 (1,0 – 3,6)	1	4,3	$0,038^{Sig}$
WCHR[3]	0,593	0,9 (0,3 – 2,8)	1	0,1	$0,817^{NS}$
SA[4]	0,306	1,2 (0,7 – 2,2)	1	0,4	$0,553^{NS}$
Financial assistance	0,216	0,8 (0,5 – 1,3)	1	0,8	$0,385^{NS}$
Total	-	-	13	32,9	$0,002^{Sig}$

Maximum likelihood = 493,89.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
[2]Within metropolitan Cape Town.
[3]Outside metropolitan Cape Town but within WCHR.
[4]Outside metropolitan Cape Town and outside WCHR but within South Africa.

B: Objective 3 (patients versus the total student community)

Table A.20 demonstrates that the following variables stratified by students presenting at the UCT-SHS-MHS with anxiety (neurotic) disorders record an altered level of statistical significance (either newly statistically significant or no longer statistically significant) to that previously reported in Table 5.191 which details Objective 3-specific findings for the patient-specific data for UCT-SHS-MHS attendees:

- The relationship between Coloured students and presentation at the UCT-SHS-MHS is now statistically significant.
- The relationship between White students and presentation at the UCT-SHS-MHS is now statistically significant.
- The relationship between students resident in metropolitan Cape Town and presentation at the UCT-SHS-MHS is no longer statistically significant.

Table A.20 Logistic regression analysis for UCT-SHS-MHS attendance versus UCT-registration without UCT-SHS-MHS attendance for students presenting with anxiety (neurotic) disorders.

Variable and subcategory	SE	Adjusted OR (with 95% CI)	Df	χ^2	ρ
Intercept	0,603	-	1	65,3	$0,000^{Sig}$
Gender	0,165	1,5 (1,1 – 2,1)	1	7,0	$0,008^{Sig}$
Race/population group[1]					
Africans	0,372	0,8 (0,4 – 1,7)	1	0,3	$0,604^{NS}$
Coloureds	0,388	0,4 (0,2 – 1,0)	1	4,3	$0,038^{Sig}$
Whites	0,333	0,5 (0,2 – 0,9)	1	5,3	$0,021^{Sig}$
Age	0,015	2,8 (0,4 – 21,0)	1	1,0	$0,312^{NS}$
Language	0,167	1,1 (0,8 – 1,5)	1	0,4	$0,551^{NS}$
Faculty	0,169	1,7 (1,2 – 2,4)	1	10,5	$0,001^{Sig}$
Level of study	0,317	2,6 (1,4 – 4,7)	1	8,7	$0,003^{Sig}$
Year of study	0,197	0,5 (0,3 – 0,8)	1	11,7	$0,001^{Sig}$
Residence (home address)					
mCT[2]	0,297	0,7 (0,4 – 1,2)	1	1,7	$0,195^{NS}$
WCHR[3]	0,569	0,7 (0,2 – 2,0)	1	0,6	$0,456^{NS}$
SA[4]	0,296	1,2 (0,7 – 2,1)	1	0,3	$0,605^{NS}$
Financial assistance	0,206	1,8 (1,2 – 2,6)	1	7,5	$0,006^{Sig}$
Total	-	-	13	95,2	$0,000^{Sig}$

Maximum likelihood = 819,37.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
[2]Within metropolitan Cape Town.
[3]Outside metropolitan Cape Town but within WCHR.
[4]Outside metropolitan Cape Town and outside WCHR but within South Africa.

(v) "Other" disorders

A: Objective 2 (patients versus controls)

Table A.21 demonstrates that the following variables stratified by students presenting at the UCT-SHS-MHS with "other" disorders record an altered level of statistical significance (either newly statistically significant or no longer statistically significant) to that previously reported in Table 5.190 which details Objective 2-specific findings for the patient-specific data for UCT-SHS-MHS attendees:

- The relationship between gender (female students) and presentation at the UCT-SHS-MHS is no longer statistically significant.
- The relationship between language (English first language speaking students) and presentation at the UCT-SHS-MHS is no longer statistically significant.

Table A.21 Logistic regression analysis for UCT-SHS-MHS attendance versus UCT-SHS attendance without UCT-SHS-MHS attendance for students presenting with "other" disorders.

Variable and subcategory	SE	Adjusted OR (with 95% CI)	Df	χ^2	p
Intercept	1,223	-	1	11,2	$0,001^{Sig}$
Gender	0,186	0,9 (0,6 – 1,3)	1	0,5	$0,474^{NS}$
Race/population group[1]					
Africans	1,039	5,3 (0,7 – 40,4)	1	2,6	$0,110^{NS}$
Coloureds	1,062	3,6 (0,4 – 28,8)	1	1,4	$0,229^{NS}$
Whites	1,022	6,0 (0,8 – 44,4)	1	3,1	$0,080^{NS}$
Age	0,186	0,4 (0,0 – 4,8)	1	0,6	$0,453^{NS}$
Language	0,190	1,5 (1,0 – 2,1)	1	4,0	$0,047^{Sig}$
Faculty	0,190	1,3 (0,9 – 1,9)	1	2,1	$0,143^{NS}$
Level of study	0,354	0,9 (0,5 – 1,9)	1	0,0	$0,864^{NS}$
Year of study	0,217	1,0 (0,7 – 1,6)	1	0,0	$0,930^{NS}$
Residence (home address)					
mCT[2]	0,331	2,4 (1,2 – 4,5)	1	6,7	$0,010^{Sig}$
WCHR[3]	0,597	0,9 (0,3 – 3,0)	1	0,0	$0,924^{NS}$
SA[4]	0,323	1,2 (0,6 – 2,3)	1	0,3	$0,574^{NS}$
Financial assistance	0,249	1,0 (0,6 – 1,6)	1	0,0	$0,847^{NS}$
Total	-	-	13	31,6	$0,003^{Sig}$

Maximum likelihood = 453,52.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
[2]Within metropolitan Cape Town.
[3]Outside metropolitan Cape Town but within WCHR.
[4]Outside metropolitan Cape Town and outside WCHR but within South Africa.

B: Objective 3 (patients versus the total student community)

Table A.22 demonstrates that the following variables stratified by students presenting at the UCT-SHS-MHS with "other" disorders record an altered level of statistical significance (either newly statistically significant or no longer statistically significant) to that previously reported in Table 5.191 which details Objective 3-specific findings for the patient-specific data for UCT-SHS-MHS attendees:

- The relationship between gender (female students) and presentation at the UCT-SHS-MHS is no longer statistically significant.
- The relationship between level of study (undergraduate students) and presentation at the UCT-SHS-MHS is no longer statistically significant.
- The relationship between students resident in metropolitan Cape Town and presentation at the UCT-SHS-MHS is no longer statistically significant.

Table A.22 Logistic regression analysis for UCT-SHS-MHS attendance versus UCT-registration without UCT-SHS-MHS attendance for students presenting with "other" disorders.

Variable and subcategory	SE	Adjusted OR (with 95% CI)	Df	χ^2	p
Intercept	1,163	-	1	24,5	$0,000^{Sig}$
Gender	0,172	1,0 (0,7 – 1,4)	1	0,1	$0,787^{NS}$
Race/population group[1]					
Africans	1,031	7,1 (0,9 – 53,8)	1	3,6	$0,056^{NS}$
Coloureds	1,049	3,3 (0,4 – 25,8)	1	1,3	$0,255^{NS}$
Whites	1,011	7,2 (1,0 – 52,4)	1	3,8	$0,050^{NS}$
Age	0,020	0,2 (0,0 – 2,4)	1	1,7	$0,187^{NS}$
Language	0,179	1,2 (0,9 – 1,7)	1	1,2	$0,266^{NS}$
Faculty	0,179	1,6 (1,1 – 2,2)	1	6,4	$0,012^{Sig}$
Level of study	0,351	1,7 (0,8 – 3,3)	1	2,1	$0,148^{NS}$
Year of study	0,215	0,5 (0,4 – 8,3)	1	7,9	$0,005^{Sig}$
Residence (home address)					
mCT[2]	0,313	0,7 (0,4 – 1,3)	1	1,4	$0,231^{NS}$
WCHR[3]	0,575	0,6 (0,2 – 2,0)	1	0,6	$0,453^{NS}$
SA[4]	0,314	1,1 (0,6 – 2,1)	1	0,2	$0,671^{NS}$
Financial assistance	0,239	1,8 (1,1 – 2,9)	1	6,4	$0,011^{Sig}$
Total	-	-	13	62,1	$0,000^{Sig}$

Maximum likelihood = 755,86.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
[2]Within metropolitan Cape Town.
[3]Outside metropolitan Cape Town but within WCHR.
[4]Outside metropolitan Cape Town and outside WCHR but within South Africa.

APPENDIX VIIIb

Individual V-codes

(i) Relationship problem

A: Objective 2 (patients versus controls)

Table A.23 demonstrates that the following variables stratified by students presenting at the UCT-SHS-MHS with relationship problems record an altered level of statistical significance (either newly statistically significant or no longer statistically significant) to that previously reported in Table 5.190 which details Objective 2-specific findings for the patient-specific data for UCT-SHS-MHS attendees:

- The relationship between language (English first language speaking students) and presentation at the UCT-SHS-MHS is no longer statistically significant.

Table A.23 Logistic regression analysis for UCT-SHS-MHS attendance versus UCT-SHS attendance without UCT-SHS-MHS attendance for students presenting with relationship problems.

Variable and subcategory	SE	Adjusted OR (with 95% CI)	Df	χ^2	ρ
Intercept	1,081	-	1	11,8	$0,001^{Sig}$
Gender	0,245	2,2 (1,4 – 3,6)	1	10,9	$0,001^{Sig}$
Race/population group[1]					
Africans	0,606	0,9 (0,3 – 2,8)	1	0,1	$0,800^{NS}$
Coloureds	0,620	0,9 (0,3 – 3,0)	1	0,0	$0,865^{NS}$
Whites	0,568	0,5 (0,2 – 1,6)	1	1,3	$0,258^{NS}$
Age	0,033	0,7 (0,0 – 14,6)	1	0,1	$0,802^{NS}$
Language	0,237	1,3 (0,8 – 2,0)	1	1,0	$0,308^{NS}$
Faculty	0,240	1,6 (1,0 – 2,6)	1	4,0	$0,044^{Sig}$
Level of study	0,514	0,7 (0,3 – 2,0)	1	0,4	$0,550^{NS}$
Year of study	0,319	1,1 (0,6 – 2,1)	1	0,2	$0,683^{NS}$
Residence (home address)					
mCT[2]	0,549	4,0 (1,4 – 11,8)	1	6,4	$0,011^{Sig}$
WCHR[3]	1,139	0,7 (0,1 – 6,7)	1	0,1	$0,770^{NS}$
SA[4]	0,542	2,4 (0,8 – 6,9)	1	2,6	$0,109^{NS}$
Financial assistance	0,285	0,9 (0,5 – 1,5)	1	0,2	$0,645^{NS}$
Total	-	-	13	38,8	$0,002^{Sig}$

Maximum likelihood = 302,02.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
[2]Within metropolitan Cape Town.
[3]Outside metropolitan Cape Town but within WCHR.
[4]Outside metropolitan Cape Town and outside WCHR but within South Africa.

B: Objective 3 (patients versus the total student community)

Table A.24 demonstrates that the following variables stratified by students presenting at the UCT-SHS-MHS with relationship problems record an altered level of statistical significance (either newly statistically significant or no longer statistically significant) to that previously reported in Table 5.191 which details Objective 3-specific findings for the patient-specific data for UCT-SHS-MHS attendees:

- The relationship between level of study (undergraduate students) and presentation at the UCT-SHS-MHS is no longer statistically significant.
- The relationship between year of study (first year (freshman/fresher) students) and presentation at the UCT-SHS-MHS is no longer statistically significant.
- The relationship between students resident in metropolitan Cape Town and presentation at the UCT-SHS-MHS is no longer statistically significant.

Table A.24 Logistic regression analysis for UCT-SHS-MHS attendance versus UCT-registration without UCT-SHS-MHS attendance for students presenting with relationship problems.

Variable and subcategory	SE	Adjusted OR (with 95% CI)	Df	χ^2	p
Intercept	0,963	-	1	34,9	$0,000^{Sig}$
Gender	0,238	2,6 (1,7 – 4,2)	1	16,7	$0,000^{Sig}$
Race/population group[1]					
Africans	0,586	1,3 (0,4 – 3,9)	1	0,1	$0,702^{NS}$
Coloureds	0,584	0,8 (0,3 – 2,5)	1	0,1	$0,712^{NS}$
Whites	0,539	0,6 (0,2 – 1,7)	1	1,0	$0,325^{NS}$
Age	0,024	0,4 (0,0 – 9,3)	1	0,4	$0,547^{NS}$
Language	0,222	1,1 (0,7 – 1,7)	1	0,3	$0,615^{NS}$
Faculty	0,830	1,9 (1,2 – 3,0)	1	7,9	$0,005^{Sig}$
Level of study	0,458	1,3 (0,5 – 3,3)	1	0,4	$0,527^{NS}$
Year of study	0,275	0,6 (0,4 – 1,1)	1	2,7	$0,099^{NS}$
Residence (home address)					
mCT[2]	0,532	1,4 (0,5 – 4,1)	1	0,5	$0,499^{NS}$
WCHR[3]	1,123	0,6 (0,1 – 5,7)	1	0,2	$0,677^{NS}$
SA[4]	0,539	2,4 (0,9 – 7,0)	1	2,8	$0,097^{NS}$
Financial assistance	0,274	1,9 (1,1 – 3,2)	1	5,2	$0,022^{Sig}$
Total	-	-	13	78,9	$0,000^{Sig}$

Maximum likelihood = 472,34.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
[2]Within metropolitan Cape Town.
[3]Outside metropolitan Cape Town but within WCHR.
[4]Outside metropolitan Cape Town and outside WCHR but within South Africa.

(ii) Family problem

A: Objective 2 (patients versus controls)

Table A.25 demonstrates that the following variables stratified by students presenting at the UCT-SHS-MHS with family problems record an altered level of statistical significance (either newly statistically significant or no longer statistically significant) to that previously reported in Table 5.190 which details Objective 2-specific findings for the patient-specific data for UCT-SHS-MHS attendees:

- The relationship between language (English first language speaking students) and presentation at the UCT-SHS-MHS is no longer statistically significant.
- The relationship between faculty (Arts, Music and Social Science and Humanities faculty students) and presentation at the UCT-SHS-MHS is no longer statistically significant.

Table A.25 Logistic regression analysis for UCT-SHS-MHS attendance versus UCT-SHS attendance without UCT-SHS-MHS attendance for students presenting with family problems.

Variable and subcategory	SE	Adjusted OR (with 95% CI)	Df	χ^2	p
Intercept	1,556	-	1	6,0	$0,014^{Sig}$
Gender	0,300	2,1 (1,2 – 3,9)	1	6,4	$0,011^{Sig}$
Race/population group[1]					
Africans	1,099	1,4 (0,2 – 11,9)	1	0,1	$0,771^{NS}$
Coloureds	1,065	4,1 (0,5 – 33,5)	1	1,8	$0,181^{NS}$
Whites	1,040	1,7 (0,2 – 13,1)	1	0,3	$0,610^{NS}$
Age	0,047	0,2 (0,0 – 13,3)	1	0,6	$0,448^{NS}$
Language	0,345	1,2 (0,6 – 2,3)	1	0,2	$0,681^{NS}$
Faculty	0,287	1,4 (0,8 – 2,5)	1	1,5	$0,222^{NS}$
Level of study	0,718	1,1 (0,3 – 4,5)	1	0,0	$0,895^{NS}$
Year of study	0,510	0,6 (0,2 – 1,7)	1	0,8	$0,364^{NS}$
Residence (home address)					
mCT[2]	0,508	3,5 (1,3 – 9,4)	1	6,0	$0,015^{Sig}$
WCHR[3]	-	-	-	-	-
SA[4]	0,516	1,8 (0,7 – 5,0)	1	1,3	$0,253^{NS}$
Financial assistance	0,355	0,9 (0,5 – 1,9)	1	0,0	$0,874^{NS}$
Total	-	-	12	42,1	$0,000^{Sig}$

Maximum likelihood = 219,90.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
[2]Within metropolitan Cape Town.
[3]Outside metropolitan Cape Town but within WCHR.
[4]Outside metropolitan Cape Town and outside WCHR but within South Africa.

B: Objective 3 (patients versus the total student community)

Table A.26 demonstrates that the following variables stratified by students presenting at the UCT-SHS-MHS with family problems record an altered level of statistical significance (either newly statistically significant or no longer statistically significant) to that previously reported in Table 5.191 which details Objective 3-specific findings for the patient-specific data for UCT-SHS-MHS attendees:

- The relationship between faculty (Arts, Music and Social Science and Humanities faculty students) and presentation at the UCT-SHS-MHS is no longer statistically significant.
- The relationship between level of study (undergraduate students) and presentation at the UCT-SHS-MHS is no longer statistically significant.
- The relationship between students resident in metropolitan Cape Town and presentation at the UCT-SHS-MHS is no longer statistically significant.

Table A.26 Logistic regression analysis for UCT-SHS-MHS attendance versus UCT-registration without UCT-SHS-MHS attendance for students presenting with family problems.

Variable and subcategory	SE	Adjusted OR (with 95% CI)	Df	χ^2	p
Intercept	1,422	-	1	17,6	$0,000^{Sig}$
Gender	0,290	2,5 (1,4 – 4,4)	1	9,9	$0,002^{Sig}$
Race/population group[1]					
Africans	1,101	0,1 (0,0 – 6,5)	1	0,4	$0,540^{NS}$
Coloureds	1,048	2,0 (0,2 – 17,0)	1	1,6	$0,201^{NS}$
Whites	1,029	3,8 (0,5 – 29,9)	1	0,5	$0,481^{NS}$
Age	0,032	2,1 (0,3 – 15,5)	1	1,2	$0,271^{NS}$
Language	0,349	1,0 (0,5 – 2,1)	1	0,0	$0,901^{NS}$
Faculty	0,275	1,7 (1,0 – 2,9)	1	3,6	$0,058^{NS}$
Level of study	0,671	1,8 (0,5 – 6,7)	1	0,8	$0,378^{NS}$
Year of study	0,474	0,4 (0,1 – 0,9)	1	4,5	$0,035^{Sig}$
Residence (home address)					
mCT[2]	0,492	1,2 (0,5 – 3,2)	1	0,1	$0,703^{NS}$
WCHR[3]	-	-	-	-	-
SA[4]	0,517	2,1 (0,8 – 5,9)	1	2,1	$0,145^{NS}$
Financial assistance	0,339	2,0 (1,0 – 3,8)	1	4,0	$0,044^{Sig}$
Total	-	-	12	53,8	$0,000^{Sig}$

Maximum likelihood = 344,42.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
[2]Within metropolitan Cape Town.
[3]Outside metropolitan Cape Town but within WCHR.
[4]Outside metropolitan Cape Town and outside WCHR but within South Africa.

(iii) Academic problem

A: Objective 2 (patients versus controls)

Table A.27 demonstrates that the following variables stratified by students presenting at the UCT-SHS-MHS with academic problems record an altered level of statistical significance (either newly statistically significant or no longer statistically significant) to that previously reported in Table 5.190 which details Objective 2-specific findings for the patient-specific data for UCT-SHS-MHS attendees:

- The relationship between gender (female students) and presentation at the UCT-SHS-MHS is no longer statistically significant.
- The relationship between language (English first language speaking students) and presentation at the UCT-SHS-MHS is no longer statistically significant.
- The relationship between faculty (Arts, Music and Social Science and Humanities faculty students) and presentation at the UCT-SHS-MHS is no longer statistically significant.
- The relationship between students resident in metropolitan Cape Town and presentation at the UCT-SHS-MHS is no longer statistically significant.
- The relationship between financial assistance (students receiving UCT-administered financial aid) and presentation at the UCT-SHS-MHS is now statistically significant.
- The model is no longer statistically significant.

Table A.27 Logistic regression analysis for UCT-SHS-MHS attendance versus UCT-SHS attendance without UCT-SHS-MHS attendance for students presenting with academic problems.

Variable and subcategory	SE	Adjusted OR (with 95% CI)	Df	χ^2	p
Intercept	1,328	-	1	14,2	$0,000^{Sig}$
Gender	0,340	1,1 (0,6 – 2,1)	1	0,1	$0,776^{NS}$
Race/population group[1]					
Africans	0,734	0,3 (0,1 – 1,3)	1	2,6	$0,105^{NS}$
Coloureds	0,786	0,5 (0,1 – 2,2)	1	0,9	$0,348^{NS}$
Whites	0,674	0,5 (0,1 – 1,7)	1	1,4	$0,242^{NS}$
Age	0,037	6,5 (0,2 – 184,8)	1	1,2	$0,273^{NS}$
Language	0,345	1,3 (0,7 – 2,5)	1	0,5	$0,461^{NS}$
Faculty	0,350	1,2 (0,6 – 2,4)	1	0,3	$0,558^{NS}$
Level of study	0,782	1,0 (0,2 – 4,4)	1	0,0	$0,948^{NS}$
Year of study	0,515	0,8 (0,3 – 2,2)	1	0,2	$0,644^{NS}$
Residence (home address)					
mCT[2]	0,780	3,9 (0,8 – 17,9)	1	3,0	$0,083^{NS}$
WCHR[3]	-	-	1	-	-
SA[4]	0,756	4,0 (0,9 – 17,8)	1	3,4	$0,065^{NS}$
Financial assistance	0,417	2,3 (1,0 – 5,2)	1	3,9	$0,047^{Sig}$
Total	-	-	12	14,4	$0,275^{NS}$

Maximum likelihood = 170,01.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
[2]Within metropolitan Cape Town.
[3]Outside metropolitan Cape Town but within WCHR.
[4]Outside metropolitan Cape Town and outside WCHR but within South Africa.

B: Objective 3 (patients versus the total student community)

Table A.28 demonstrates that the following variables stratified by students presenting at the UCT-SHS-MHS with academic problems record an altered level of statistical significance (either newly statistically significant or no longer statistically significant) to that previously reported in Table 5.191 which details Objective 3-specific findings for the patient-specific data for UCT-SHS-MHS attendees:

- The relationship between gender (female students) and presentation at the UCT-SHS-MHS is no longer statistically significant.
- The relationship between faculty (Arts, Music and Social Science and Humanities faculty students) and presentation at the UCT-SHS-MHS is no longer statistically significant.
- The relationship between level of study (undergraduate students) and presentation at the UCT-SHS-MHS is no longer statistically significant.
- The relationship between year of study (first year (freshman/fresher) students) and presentation at the UCT-SHS-MHS is no longer statistically significant.
- The relationship between students resident in metropolitan Cape Town and presentation at the UCT-SHS-MHS is no longer statistically significant.

Table A.28 Logistic regression analysis for UCT-SHS-MHS attendance versus UCT-registration without UCT-SHS-MHS attendance for students presenting with academic problems.

Variable and subcategory	SE	Adjusted OR (with 95% CI)	Df	χ^2	p
Intercept	1,294	-	1	25,9	$0,000^{Sig}$
Gender	0,333	1,3 (0,7 – 2,4)	1	0,5	$0,484^{NS}$
Race/population group[1]					
Africans	0,723	0,4 (0,1 – 1,6)	1	1,7	$0,188^{NS}$
Coloureds	0,762	0,4 (0,1 – 1,8)	1	1,3	$0,246^{NS}$
Whites	0,649	0,5 (0,1 – 1,9)	1	1,0	$0,317^{NS}$
Age	0,030	4,6 (0,1 – 260,9)	1	0,6	$0,458^{NS}$
Language	0,334	1,1 (0,6 – 2,1)	1	0,1	$0,790^{NS}$
Faculty	0,345	1,6 (0,8 – 3,1)	1	1,6	$0,200^{NS}$
Level of study	0,730	1,5 (0,4 – 6,5)	1	0,4	$0,550^{NS}$
Year of study	0,472	0,5 (0,2 – 1,2)	1	2,4	$0,119^{NS}$
Residence (home address)					
mCT[2]	0,765	1,4 (0,3 – 6,2)	1	0,2	$0,677^{NS}$
WCHR[3]	-	-	-	-	-
SA[4]	0,756	4,0 (0,9 – 17,5)	1	3,3	$0,068^{NS}$
Financial assistance	0,415	4,6 (2,1 – 10,4)	1	13,7	$0,000^{Sig}$
Total	-	-	12	42,2	$0,000^{Sig}$

Maximum likelihood = 244,03.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
[2]Within metropolitan Cape Town.
[3]Outside metropolitan Cape Town but within WCHR.
[4]Outside metropolitan Cape Town and outside WCHR but within South Africa.

(iv) Complicated bereavement

A: Objective 2 (patients versus controls)

Table A.29 demonstrates that the following variables stratified by students presenting at the UCT-SHS-MHS with complicated bereavement record an altered level of statistical significance (either newly statistically significant or no longer statistically significant) to that previously reported in Table 5.190 which details Objective 2-specific findings for the patient-specific data for UCT-SHS-MHS attendees:

- The relationship between language (English first language speaking students) and presentation at the UCT-SHS-MHS is no longer statistically significant.
- The relationship between faculty (Arts, Music and Social Science and Humanities faculty students) and presentation at the UCT-SHS-MHS is no longer statistically significant.
- The relationship between students resident in metropolitan Cape Town and presentation at the UCT-SHS-MHS is no longer statistically significant.
- The model is no longer statistically significant.

Table A.29 Logistic regression analysis for UCT-SHS-MHS attendance versus UCT-SHS attendance without UCT-SHS-MHS attendance for students presenting with complicated bereavement.

Variable and subcategory	SE	Adjusted OR (with 95% CI)	Df	χ^2	p
Intercept	1,484	-	1	14,3	$0,000^{Sig}$
Gender	0,322	2,2 (1,1 – 4,0)	1	5,7	$0,017^{Sig}$
Race/population group[1]					
Africans	1,108	1,5 (0,2 – 13,5)	1	0,2	$0,696^{NS}$
Coloureds	1,108	1,9 (0,2 – 16,8)	1	0,3	$0,557^{NS}$
Whites	1,059	1,7 (0,2 – 13,9)	1	0,3	$0,600^{NS}$
Age	0,037	3,6 (0,1 – 101,3)	1	0,6	$0,455^{NS}$
Language	0,330	1,3 (0,7 – 2,4)	1	0,5	$0,469^{NS}$
Faculty	0,321	1,1 (0,6 – 2,1)	1	0,2	$0,675^{NS}$
Level of study	0,634	0,8 (0,2 – 2,9)	1	0,1	$0,788^{NS}$
Year of study	0,380	1,2 (0,6 – 2,5)	1	0,2	$0,654^{NS}$
Residence (home address)					
mCT[2]	0,582	1,7 (0,6 – 5,5)	1	0,9	$0,338^{NS}$
WCHR[3]	>8 000	0,0 (–)	1	0,0	$1,000^{NS}$
SA[4]	0,567	1,2 (0,4 – 3,8)	1	0,1	$0,708^{NS}$
Financial assistance	0,390	1,6 (0,8 – 3,5)	1	1,5	$0,215^{NS}$
Total	-	-	13	18,4	$0,145^{NS}$

Maximum likelihood = 192,37.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
[2]Within metropolitan Cape Town.
[3]Outside metropolitan Cape Town but within WCHR.
[4]Outside metropolitan Cape Town and outside WCHR but within South Africa.

B: Objective 3 (patients versus the total student community)

Table A.30 demonstrates that the following variables stratified by students presenting at the UCT-SHS-MHS with complicated bereavement record an altered level of statistical significance (either newly statistically significant or no longer statistically significant) to that previously reported in Table 5.191 which details Objective 3-specific findings for the patient-specific data for UCT-SHS-MHS attendees:

- The relationship between faculty (Arts, Music and Social Science and Humanities faculty students) and presentation at the UCT-SHS-MHS is no longer statistically significant.
- The relationship between level of study (undergraduate students) and presentation at the UCT-SHS-MHS is no longer statistically significant.
- The relationship between year of study (first year (freshman/fresher) students) and presentation at the UCT-SHS-MHS is no longer statistically significant.
- The relationship between students resident in metropolitan Cape Town and presentation at the UCT-SHS-MHS is no longer statistically significant.

Table A.30 Logistic regression analysis for UCT-SHS-MHS attendance versus UCT-registration without UCT-SHS-MHS attendance for students presenting with complicated bereavement.

Variable and subcategory	SE	Adjusted OR (with 95% CI)	Df	χ^2	ρ
Intercept	1,427	-	1	28,7	$0,000^{Sig}$
Gender	0,316	2,5 (1,3 – 4,7)	1	8,4	$0,004^{Sig}$
Race/population group[1]					
Africans	1,089	2,0 (0,2 – 17,1)	1	0,4	$0,519^{NS}$
Coloureds	1,090	1,5 (0,2 – 12,8)	1	0,1	$0,704^{NS}$
Whites	1,042	1,8 (0,2 – 13,6)	1	0,3	$0,588^{NS}$
Age	0,029	2,3 (0,0 – 110,9)	1	0,2	$0,676^{NS}$
Language	0,310	1,1 (0,6 – 2,0)	1	0,1	$0,743^{NS}$
Faculty	0,313	1,4 (0,7 – 2,5)	1	1,0	$0,314^{NS}$
Level of study	0,579	1,6 (0,5 – 4,9)	1	0,6	$0,435^{NS}$
Year of study	0,332	0,7 (0,3 – 1,3)	1	1,6	$0,199^{NS}$
Residence (home address)					
mCT[2]	0,545	0,9 (0,3 – 2,7)	1	0,0	$0,898^{NS}$
WCHR[3]	-	-	-	-	-
SA[4]	0,558	1,8 (0,6 – 5,5)	1	1,2	$0,273^{NS}$
Financial assistance	0,382	3,4 (1,6 – 7,2)	1	10,2	$0,001^{Sig}$
Total	-	-	12	37,7	$0,000^{Sig}$

Maximum likelihood = 286,26.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
[2]Within metropolitan Cape Town.
[3]Outside metropolitan Cape Town but within WCHR.
[4]Outside metropolitan Cape Town and outside WCHR but within South Africa.

(v) Pre-and post termination counselling for unplanned/unwanted pregnancy

A: Objective 2 (patients versus controls)

Table A.31 demonstrates that the following variables stratified by students presenting at the UCT-SHS-MHS for pre-and post termination counselling for an unplanned/unwanted pregnancy record an altered level of statistical significance (either newly statistically significant or no longer statistically significant) to that previously reported in Table 5.190 which details Objective 2-specific findings for the patient-specific data for UCT-SHS-MHS attendees:

- The relationship between language (English first language speaking students) and presentation at the UCT-SHS-MHS is no longer statistically significant.
- The relationship between faculty (Arts, Music and Social Science and Humanities faculty students) and presentation at the UCT-SHS-MHS is no longer statistically significant.
- The relationship between students resident in metropolitan Cape Town and presentation at the UCT-SHS-MHS is no longer statistically significant.

Table A.31 Logistic regression analysis for UCT-SHS-MHS attendance versus UCT-SHS attendance without UCT-SHS-MHS attendance for students presenting for pre- and post-termination counselling for unplanned/unwanted pregnancy.

Variable and subcategory	SE	Adjusted OR (with 95% CI)	Df	χ^2	p
Intercept	1,490	-	1	12,9	0,001^{Sig}
Gender	0,342	3,3 (1,7 – 6,4)	1	12,2	0,000^{Sig}
Race/population group[1]					
Africans	1,091	1,8 (0,2 – 15,3)	1	0,3	0,590^{NS}
Coloureds	1,101	1,7 (0,2 – 14,8)	1	0,2	0,628^{NS}
Whites	1,048	1,5 (0,2 – 11,4)	1	0,1	0,721^{NS}
Age	0,039	3,8 (0,1 – 126,5)	1	0,6	0,451^{NS}
Language	0,304	1,5 (0,8 – 2,7)	1	1,6	0,207^{NS}
Faculty	0,319	1,1 (0,6 – 2,0)	1	0,1	0,785^{NS}
Level of study	0,736	0,7 (0,2 – 2,9)	1	0,3	0,600^{NS}
Year of study	0,473	1,0 (0,4 – 2,4)	1	0,0	0,921^{NS}
Residence (home address)					
mCT[2]	0,525	2,4 (0,9 – 6,6)	1	2,7	0,101^{NS}
WCHR[3]	-	-	-	-	-
SA[4]	0,522	1,3 (0,5 – 3,6)	1	0,3	0,616^{NS}
Financial assistance	0,394	1,0 (0,5 – 2,3)	1	0,0	0,903^{NS}
Total	-	-	12	24,1	0,020^{Sig}

Maximum likelihood = 189,48.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
[2]Within metropolitan Cape Town.
[3]Outside metropolitan Cape Town but within WCHR.
[4]Outside metropolitan Cape Town and outside WCHR but within South Africa.

B: Objective 3 (patients versus the total student community)

Table A.32 demonstrates that the following variables stratified by students presenting at the UCT-SHS-MHS for pre-and post termination counselling for an unplanned/unwanted pregnancy record an altered level of statistical significance (either newly statistically significant or no longer statistically significant) to that previously reported in Table 5.191 which details Objective 3-specific findings for the patient-specific data for UCT-SHS-MHS attendees:

- The relationship between faculty (Arts, Music and Social Science and Humanities faculty students) and presentation at the UCT-SHS-MHS is no longer statistically significant.
- The relationship between level of study (undergraduate students) and presentation at the UCT-SHS-MHS is no longer statistically significant.
- The relationship between year of study (first year (freshman/fresher) students) and presentation at the UCT-SHS-MHS is no longer statistically significant.
- The relationship between students resident in metropolitan Cape Town and presentation at the UCT-SHS-MHS is no longer statistically significant.

Table A.32 Logistic regression analysis for UCT-SHS-MHS attendance versus UCT-registration without UCT-SHS-MHS attendance for students presenting for pre- and post-termination counselling for unplanned/unwanted pregnancy.

Variable and subcategory	SE	Adjusted OR (with 95% CI)	Df	χ^2	ρ
Intercept	1,419	-	1	23,1	$0,000^{Sig}$
Gender	0,337	3,7 (1,9 – 7,2)	1	15,1	$0,000^{Sig}$
Race/population group[1]					
Africans	1,079	2,8 (0,3 – 23,5)	1	0,9	$0,334^{NS}$
Coloureds	1,084	1,5 (0,2 – 12,9)	1	0,2	$0,692^{NS}$
Whites	1,032	2,7 (0,3 – 12,9)	1	0,3	$0,606^{NS}$
Age	0,030	0,8 (0,0 – 42,9)	1	0,0	$0,903^{NS}$
Language	0,290	1,3 (0,8 – 2,4)	1	1,0	$0,320^{NS}$
Faculty	0,311	1,3 (0,7 – 2,4)	1	0,7	$0,413^{NS}$
Level of study	0,675	1,2 (0,3 – 4,7)	1	0,1	$0,746^{NS}$
Year of study	0,426	0,5 (0,2 – 1,2)	1	2,1	$0,145^{NS}$
Residence (home address)					
mCT[2]	0,513	0,8 (1,4 – 2,3)	1	0,1	$0,733^{NS}$
WCHR[3]	-	-	-	-	-
SA[4]	0,530	1,4 (0,5 – 3,8)	1	0,3	$0,566^{NS}$
Financial assistance	0,382	2,3 (1,1 – 4,9)	1	4,9	$0,027^{Sig}$
Total	-	-	12	42,4	$0,000^{Sig}$

Maximum likelihood = 283,93.
[1]Race/population group is classified according to the now repealed Population Registration Act of 1951.
[2]Within metropolitan Cape Town.
[3]Outside metropolitan Cape Town but within WCHR.
[4]Outside metropolitan Cape Town and outside WCHR but within South Africa.

APPENDIX VIIIc

Summary – maximum likelihood function

The method of maximum likelihood is a general method of estimating parameters of a population by values that maximise the likelihood (L) of a sample. Given the respective model, the larger the likelihood of the model, the larger is the probability of the dependent variable values to occur in the sample. Therefore, the greater the likelihood, the better is the fit of the model to the data (StatSoft, 1998).

Therefore, Tables A.33 and A.34 both demonstrate that, of the individual diagnoses recorded by psychologists, psychiatrist and, where appropriate, medical officers, affective disorder and academic problem are responsible for the best fit and the worst fit, respectively, of the model to the data.

Table A.33 Summary of final loss values recorded in the logistic regression model for Objective 2 (patients versus controls) for selected demographic, academic, residential (home address) and financial assistance variables.

(a) Major diagnostic category			
Diagnosis	**Maximum likelihood**	**Difference from value recorded in Table 5.190**	**Rank**
Affective disorder	1 215,35	-363,75 (or –23,0 per cent)	1
Adjustment disorder	566,99	-1 012,11 (or –64,1 per cent)	2
V-codes	494,07	-1 085,03 (or –68,7 per cent)	3
Anxiety (neurotic) disorder	493,89	-1 085,21 (or –68,7 per cent)	4
"Other" disorders	453,52	-1 125,58 (or –71,3 per cent)	5
Table 5.190	1 579,10	-	-
(b) Individual V-codes			
Diagnosis	**Maximum likelihood**	**Difference from value recorded in Table 5.190**	**Rank**
Relationship problem	302,02	-1 277,08 (or –80,9 per cent)	1
Family problem	219,90	-1 359,20 (or –86,1 per cent)	2
Academic problem	170,01	-1 409,09 (or –89,2 per cent)	5
Complicated bereavement	192,37	-1 386,73 (or –87,8 per cent)	3
Pre- and post-termination counselling for unplanned/unwanted pregnancy	189,48	-1 389,62 (or –88,0 per cent)	4
Table 5.190	1 579,10	-	-

Table A.34 Summary of final loss values recorded in the logistic regression model for Objective 3 (patients versus the total student community) for selected demographic, academic, residential (home address) and financial assistance variables.

(a) Major diagnostic category			
Diagnosis	**Maximum likelihood**	**Difference from value recorded in Table 5.191**	**Rank**
Affective disorder	2 467,28	-763,08 (or –23,6 per cent)	1
Adjustment disorder	981,61	-2 248,75 (or –69,6 per cent)	2
V-codes	826,89	-2 403,47 (or –74,4 per cent)	3
Anxiety (neurotic) disorder	819,37	-2 410,99 (or –74,6 per cent)	4
"Other" disorders	755,86	-2 474,50 (or –76,6 per cent)	5
Table 5.191	3 230,36	-	-
(b) Individual V-codes			
Diagnosis	**Maximum likelihood**	**Difference from value recorded in Table 5.191**	**Rank**
Relationship problem	472,34	-2 758,02 (or –85,4 per cent)	1
Family problem	344,42	-2 885,94 (or –89,3 per cent)	2
Academic problem	244,03	-2 986,33 (or –92,4 per cent)	5
Complicated bereavement	286,26	-2 944,10 (or –91,1 per cent)	3
Pre- and post-termination counselling for unplanned/unwanted pregnancy	283,93	-2 946,43 (or –91,2 per cent)	4
Table 5.191	3 230,36	-	-

APPENDIX IX

Student service-orientated departments relevant to the UCT-SHS study – additional material to that appearing in section 6.3.

(a) University of Cape Town Student Development and Services Department (UCT-SDSD)

(b) University of Cape Town Student Housing Office (UCT-SHO)

(c) Inter-faculty Academic Departments

(d) Schematic maps of the University of Cape Town

This appendix serves to outline student service-orientated departments relevant to the UCT-SHS study. The format adopted here is to quote relevant extracts from a variety of official University of Cape Town information sheets. Appendix IXa details the structure and function of the Student Development and Services Department (UCT-SDSD) – formerly known as the Student Affairs Department (UCT-SAD/SAF) which is the administrative department that is hierarchically related to the UCT-SHS. Included in this is a brief summary of the proceedings of the subcommittee established by the Student Affairs Committee to review the provision of counselling services in the former UCT-SAD/SAF. Subcommittee findings relating to individual UCT-SDSD student service-orientated sections are included in this mini-review. Subsequent details pertaining to the Student Advice and Development Centre (UCT-SADC) and the Undergraduate Financial Aid Office (UCT-UFAO) which are the two major student service-orientated sections of the UCT-SDSD follow. Appendix IXb and Appendix IXc provide an overview of the Student Housing Office (UCT-SHO) and the inter-faculty academic departments such as the Academic Development Programme (UCT-ADP), respectively, which are both student service-orientated (sub)departments involved in the counselling of students on campus. These (sub)departments which play an active role in the provision (and delivery) of both formal and informal counselling services to students affected by various psychological or psychiatric complaints are, by implication, either directly or indirectly linked to the UCT-SHS study. They are not only theoretically linked to the UCT-SHS via hierarchical organograms but also functionally linked by their student-related activities and should,

therefore, derive benefit from the findings of this study. Appendix IXd employs two schematic maps compiled by the UCT Central Administration to depict the individual buildings of Upper Campus as well as the setting of the various campuses and residences in the local region. It subsequently uses a geocoded map of metropolitan Cape Town (adapted from Rip, Keen and Kibel, 1986) to further locate the University and other relevant institutions within metropolitan Cape Town. (This geocoded map also appears in Appendix IV which details geographic techniques employed in the UCT-SHS study.)

APPENDIX IXa

Student Development and Services Department and Component Sections

(i) University of Cape Town Student Development and Services Department (UCT-SDSD)

This subheading details the structure and function of the UCT-SDSD (formerly known as the Student Affairs Department (UCT-SAD/SAF)) and its component sections within the University community. It also outlines the terms of reference and comments raised by the subcommittee established by the Student Affairs Committee to review the provision of counselling services in the former UCT-SAD/SAF. Student attendees of the UCT-SHS-MHS and the UCT-SHS serve as patients and controls, respectively, in this study while both the Student Advice and Development Centre (UCT-SADC) and the Undergraduate Financial Aid Office (UCT-UFAO) should benefit from the results obtained by the UCT-SHS study (refer to sections 6.3.2.10 and 6.3.2.12, respectively, for further details).

A: Background information and function

Student Development and Services is an administrative department for which the Dean of Students is responsible. Its purpose is to support and facilitate student activities, in particular the activities of student government, student sport and student clubs and organisations, to manage the University's undergraduate financial aid programme, and to provide student advice services and student health services. The Student Development and Services Department has offices in the Otto Beit Students' Union Building, the Sports Centre and at Protem Campus. The members of the department are University staff first and foremost. They are expected to provide services to, and establish and maintain relationships of trust with individual students and elected student leaders. The University's Executive Officers and the Registrar look to members of the Student Development and Services Department to represent University policy to students, to keep the executive and the administration informed about student views, attitudes, activities and plans, to assist students, and where possible, to resolve disputes and differences of opinion that may arise between the executive and/or the administration on the one hand and individual students and/or student bodies on the other. They are expected to do so in the context of a policy of openness to students and of involving students in the decision-making process.

B: Organisational structure and staffing

The Department is organised into seven sections. Four provide services to individual students. These are:

- the Student Health Service;
- the Student Advice and Development Centre which helps individual students with non-academic problems;
- the Undergraduate Financial Aid Office which administers the University's undergraduate bursaries, scholarships and loans; and

- the Job Opportunities Bureau which seeks to maximise the number of employment opportunities for students, particularly financially needy students.

Three provide services to student bodies. These are:

- the Sports Administration which administers sport at the University;
- the Student Affairs Treasury and SRC Secretariat which provides administration support services for the SRC, its subcommittees, faculty councils, clubs and societies and other sections of the department, and
- the Student Affairs Secretariat which looks after several committees and the University's student disciplinary tribunals, and assist student leadership.

Each section is managed by a Head of Section who reports to the Dean of Students. There are some 65 posts on the department's establishment and the department also employs between 100 and 150 temporary members of staff each year, many of them students, and most of them part-time.

C: Subcommittee to review counselling services in the former UCT-SAD/SAF

This subheading details information concerning the subcommittee to review counselling services in the former Student Affairs Department (UCT-SAD/SAF). This material has been included here (and as a subheading in material outlining the structure and function of other student service-orientated departments) as the subcommittee represents an attempt by relevant University authorities to assess the nature and distribution of counselling services offered to students. The findings of the subcommittee (as outlined in relevant subheadings) help to contextualise the role of the UCT-SHS-MHS in providing professional services to students affected by various psychological or psychiatric complaints – especially with respect to other non-professional services being offered by other student service-orientated facilities to these students. This complex (and largely unresolved) interrelationship between these different facilities should be further considered when the contextual framework is examined. The UCT-SHS study should, therefore, be viewed relative to these other facilities that operate (largely) independently of the UCT-SHS-MHS. Consequently, background material relating to many of these student service-orientated facilities/departments approached or mentioned by the subcommittee have been included in this subsection. In addition, further reference will be made to these facilities where they are relevant to either the function of the UCT-SHS-MHS or the scope of the UCT-SHS study.

– Background

During 1994 the Student Affairs Committee established a subcommittee (convened by Professor A.R.L. Dawes, Head: Department of Psychology) to review the provision of counselling services in the former UCT-SAD/SAF and consider the most effective and efficient delivery and coordination of available services. The subcommittee was asked to review the structure of the counselling services offered at UCT – counselling outside the former UCT-SAD/SAF occurred (and still occurs) in the

residences, the UCT Academic Development Programme (ADP), the respective Faculty Offices and is performed by the relationship between the UCT-SHS and the UCT-SADC. It also considered whether an integrated counselling service should be established. During its tenure, the subcommittee interviewed representatives of the UCT-SHS, UCT-SHS-MHS, UCT-SADC, UCT-UFAO, UCT Careers Office, residence wardens, Sexual Harassment Panel, Disability Unit, Medical students' peer counselling service (SAS) and the Students' Representative Council (SRC).

– Commentary re coordination of student counselling services

The subcommittee notes that there is counselling taking place in so many formal and informal ways, in so many different sectors, that it is almost impossible to obtain a proper overview of the extent and nature of student problems, which makes it very difficult to plan rationally for service provision. In addition, communication between sectors is generally poor which leads to a lack of clarity concerning service boundaries between units, duplication, suspicion and hostility.

– Commentary re optimal model for UCT counselling/psychotherapy service(s)

The subcommittee notes that the optimal counselling/advice giving/psychotherapeutic service would have a variety of functions and staff with various skills including, inter alia, practical advice giving, counselling around areas like financial problems, sexual harassment, study problems, individual and group psychotherapy, education around, for example, eating disorders, alcohol abuse, violence and proactive work – particularly in residences and training subwardens. There appeared, however, to be a lack of consensus as to whether the component counselling units should be geographically and structurally integrated.

(ii) University of Cape Town Student Advice and Development Centre (UCT-SADC)

This subheading details the function of the UCT-SADC which is a potential beneficiary of the UCT-SHS study together with relevant findings raised by the subcommittee established by the Student Affairs Committee to review the provision of counselling services in the former UCT-SAD/SAF.

A: Background information and function

The focus of the UCT-SADC is on the disadvantaged Black student population. It plays a major role in the orientation of new Black students. It gives advice on a range of aspects affecting more disadvantaged students such as financial matters, bursaries, accommodation, etc. It also manages bursaries, arranges employment for students and lifts home, runs a study venue scheme and compiles a manual of student services. The UCT-SADC also counsels students with personal problems and does a lot of crisis

intervention work. Some problems become apparent in the discussion of more instrumental needs. It is a very open non-bureaucratic active walk-in centre with a holistic approach to student problems.

B: Organisational structure and staffing

The UCT-SADC is staffed by a Coordinator – with a background in social work – who is mainly engaged in student counselling and management duties, two Financial Advisors and a General Student Advisor (a psychology masters graduate) who also does counselling. The UCT-SADC also provides internships for students as part of the CV building programme for graduates. Reception is handled by students.

C: Relevant review subcommittee findings

The subcommittee established by the Student Affairs Committee to review the provision of counselling services in the former UCT-SAD/SAF received, inter alia, the following input from the UCT-SADC concerning service coordination and staffing:

- The student staff presented an important peer presence at the reception which allowed preliminary peer counselling and referral to the full-time staff;
- Black students, who constituted the majority of visitors at the UCT-SADC, had a negative perception of psychotherapy (as provided in the UCT-SHS-MHS), which did not extend to going to the UCT-SADC for assistance;
- Students normally arrived at their more deep-seated emotional problems through discussing their immediate practical needs, and
- The UCT-SADC strove to give students an informed choice – which included the option of psychotherapy when this was needed by initially diffusing fears, reassuring and demystifying this therapeutic process.

(iii) University of Cape Town Undergraduate Financial Aid Office (UCT-UFAO)

This subheading details the function of the UCT-UFAO which is a potential beneficiary of the UCT-SHS study together with relevant findings raised by the subcommittee established by the Student Affairs Committee to review the provision of counselling services in the former UCT-SAD/SAF.

A: Background information and function

The UCT-UFAO provides bursary assistance to financially needy undergraduate students, loans for financially needy undergraduate and postgraduate students and scholarships for meritorious students. About 2 600 students qualified for UCT financial aid in 1995. Bursaries are granted on the basis of financial need, the course undertaken and academic achievement among other criteria. Bursaries vary in value and many are renewable depending on results and annual proof of financial need. Bursaries are grants and are not repayable. The office awarded about R19 million in bursaries in 1995. Loans are

granted on the basis of need. Interest is charged and repayment is required when recipients are no longer registered as full-time students at UCT. Students were offered about R12 million in loans in 1995. Students requiring financial aid from UCT have to apply each year on a form which is provided in the application for admission package for new students and is freely available for currently registered students. Parental or students' own incomes have to be proven by the submission of supporting documentation, e.g. payslips, and the student has to pass UCT's stringent means test before being deemed eligible for assistance. The office received and processed over 8 000 applications for financial aid in 1995.

B: Organisational structure and staffing

The UCT-UFAO consists of six full-time, permanent staff members (Head of Financial Aid, Deputy Head, Student Loan Administrator, Student Financial Advisor, Secretary and Receptionist/Financial Aid Clerk) and three part-time, permanent staff members (two assessors and an assessor intern). During peak periods, the number of casual staff employed can be as high as ten.

C: Relevant review subcommittee findings

The subcommittee established by the Student Affairs Committee to review the provision of counselling services in the former UCT-SAD/SAF received, inter alia, the following input from the UCT-UFAO concerning service coordination and staffing:

- The UCT-UFAO had a very complicated financial aid package so that it was normally necessary to counsel students and parents about this package, and
- Students, due to desperation about their financial situation, sometimes became distressed and/or aggressive with staff at the UCT-UFAO when they did not obtain the assistance they expected – referrals were made to the UCT-SHS-MHS in cases of serious depression and other serious distress while the UCT-SADC saw students who needed support of a practical, short-term nature.

APPENDIX IXb

University of Cape Town Student Housing Office (UCT-SHO)

This appendix details the function of the UCT-SHO (including the various University-administered residences) which is a potential beneficiary of the UCT-SHS study together with relevant findings raised by the subcommittee established by the Student Affairs Committee to review the provision of counselling services in the former UCT-SAD/SAF.

(i) Background Information and Function

The Student Housing Office (UCT-SHO), which is the responsibility of the Buildings and Services Department, is located in the Protem complex on Lower Campus. The Director of Student Housing administers a budget of some R42 million for a student population housed in the formal student housing system (circa 1995). Some 4 200 undergraduates and postgraduate students are distributed across 23 individual University-administered residences of sizes varying from 400-bed units to 10-bed units.

These University-administered residences are as follows:

- Baxter Hall
- Claridges
- College House
- Consolata House
- Driekoppen (now Kopano)
- Forest Hill
- Fuller Hall
- Glenres
- Groote Schuur Residence and Mansions
- J.P. Duminy Court
- Kilindini
- Leo Marquard Hall
- Liesbeeck Gardens
- Medical Residence
- Rondeberg Flats
- Rosebank Hall
- Smuts Hall
- T.B. Davie Court
- The Woolsack
- Tugwell Hall
- University House
- Varietas
- Wolmunster

(ii) Organisational Structure and Staffing

The UCT-SHO consists of the Director: Student Housing and his secretary together with a Deputy Vice-Chancellor who serves as chairman of the Residence Committee, the deputy chairman, the A Hall Senior Warden and 19 Wardens (together with a varying number of Subwardens and Assistant Wardens) of the individual University-administered residences. The Warden (Subwarden and/or Assistant Warden) of each University-administered residence is responsible for the welfare of resident students and the control of the residence by acting as an advisor with regard to physical, emotional, academic or other needs of students and by ensuring that the rules of the residence and the University are adhered to. These responsibilities include the following activities:

- acting as advisor to students in the case of physical, emotional, academic or other needs;
- ensuring that the academic and social needs and interests of students are served in the best possible way;
- ensuring that the rules of the residence and of the University are observed;
- ensuring that the interests of the University are protected while students are in the residence;
- appointing and controlling the tutor and mentor progammes;
- appointing subwardens and controlling subwardens, and
- undertaking as well as ensuring that a variety of administrative tasks are efficiently performed.

(iii) Relevant Review Subcommittee Findings

The subcommittee established by the Student Affairs Committee to review the provision of counselling service in the former UCT-SAD/SAF received, inter alia, the following input from the UCT-SHO (including residences) concerning service coordination and staffing:

- Subwardens provided micro-counselling and referrals to other counselling services (including the UCT-SHS-MHS) – however, their training was inadequate to equip them to handle serious cases;
- There were increasing "social" problems in the residence system with increased levels of violence posing a particularly disturbing situation, together with the abuse of alcohol and drugs;
- Cultural harassment, which was defined as tension between African/Black students who come from ethnic groups which practised initiation on the one hand, and those which did not on the other, was also becoming a problem;
- Referrals were made to the UCT-SADC in cases considered to be of a "social work" nature, and
- Serious psychological problems were referred to the UCT-SHS-MHS – however, there was a sense among students in the residence system that referrals to the UCT-SHS-MHS would not yield satisfactory results.

APPENDIX IXc

Inter-faculty Academic Departments

(i) University of Cape Town Academic Development Programme (UCT-ADP)

This appendix details the function of the UCT-ADP which is a potential beneficiary of the UCT-SHS study. In addition, the subcommittee established by the Student Affairs Committee to review the provision of counselling services in the former UCT-SAD/SAF highlights the UCT-ADP as a provider of counselling services outside the UCT-SAD/SAF. Detailed information regarding the background and function (especially) of the UCT-ADP have been included in this subdivision as there is a degree of overlap between the clinical observation that historically disadvantaged Black students are more inclined to certain mental disorders presenting as psychological or psychiatric complaints at the UCT-SHS-MHS than their generally historically advantaged White peers and the perceived role of the UCT-ADP to assist educationally underprepared Black students in their adjustment to the demands of University life. This hypothesis is best illustrated, below, in the concluding paragraph of the background information and function subheading. It is, indeed, important that the University service-orientated departments, including the UCT-SHS-MHS, have effective channels of communication.

A: Background information and function

Although it is recognised that educational disadvantage can result from a variety of circumstances, in South Africa the major cause has been the segregated education system itself, reinforced by the general socio-economic inequalities in the country. The ADP has therefore been established not simply in an effort to reduce the overall first-year failure rate or as a way of dealing with "weak" students, but rather as a central element of UCT's response to the inequalities in South Africa's education system. It follows that the ADP has a particular concern for the educational needs of students who matriculated under the education departments responsible for "Black" (African), "Coloured" and "Indian" education. In attempting to assist students to realise their academic potential, the ADP has in recent years focused much of its work on the design and implementation, in association with the relevant faculties and departments, of first-year level courses and curricula that are geared to the needs of educationally disadvantaged students and are offered as alternatives to traditional first-year courses. This reflects the belief that rigid and monolithic curricular structures cannot be expected to serve the needs of the increasingly diverse student intake, particularly at entry level. These alternative curricula (including "bridging" programmes) are generally linked to special admissions programmes which offer conditional admission to talented but disadvantaged students who do not meet standard entry criteria. They are thus regarded as a key means of raising Black student participation and success rates at UCT. The form of intervention that is necessary is clearly dependent on factors such as the level of student underpreparedness and the nature and demands of the regular courses which students are taking or for which they are being prepared. There is thus a close relationship between

the nature of the educational intervention that is required and the willingness and ability of academic departments to provide a learning environment that can accommodate the needs of a heterogeneous student intake.

In addition, it is recognised that non-academic factors often result in students experiencing increased difficulty with their studies, and the University is continually seeking methods of improving its social support services in such areas as financial assistance, accommodation and student counselling. While the ADP has limited formal responsibilities in the provision of social support services, it is represented on a number of University bodies that are involved in this area, and many ADP staff members provide a vital informal link between students and the service departments of the University administration.

B: Organisational structure and staffing

The ADP is an inter-faculty unit responsible to the Committee on University Education. The ADP is currently represented by the Director, ex officio, on the Senate and on the Boards of the Faculties of Arts, Commerce, Engineering, Science, and Social Science and Humanities, and by the Deputy Director on the Board of Education. In addition, many other ADP staff are members of the Boards of the Faculties to which they are seconded.

While the ADP has its own core staff establishment – consisting at present of 15 permanent academic posts, 34 temporary full-time academic posts and three administrative posts – and employs some 28 lecturers and tutors in various part-time positions, its organisation reflects its essentially decentralised structure. The Central Unit – comprising Director, Deputy Director, Language Development and administrative staff, and the Alternative Admissions Research Project – is responsible for the overall coordination of ADP activities. All other ADP academic staff are seconded to their "home" faculties or departments, and are responsible to the relevant Dean or Head of Department as well as to the ADP.

APPENDIX IXd

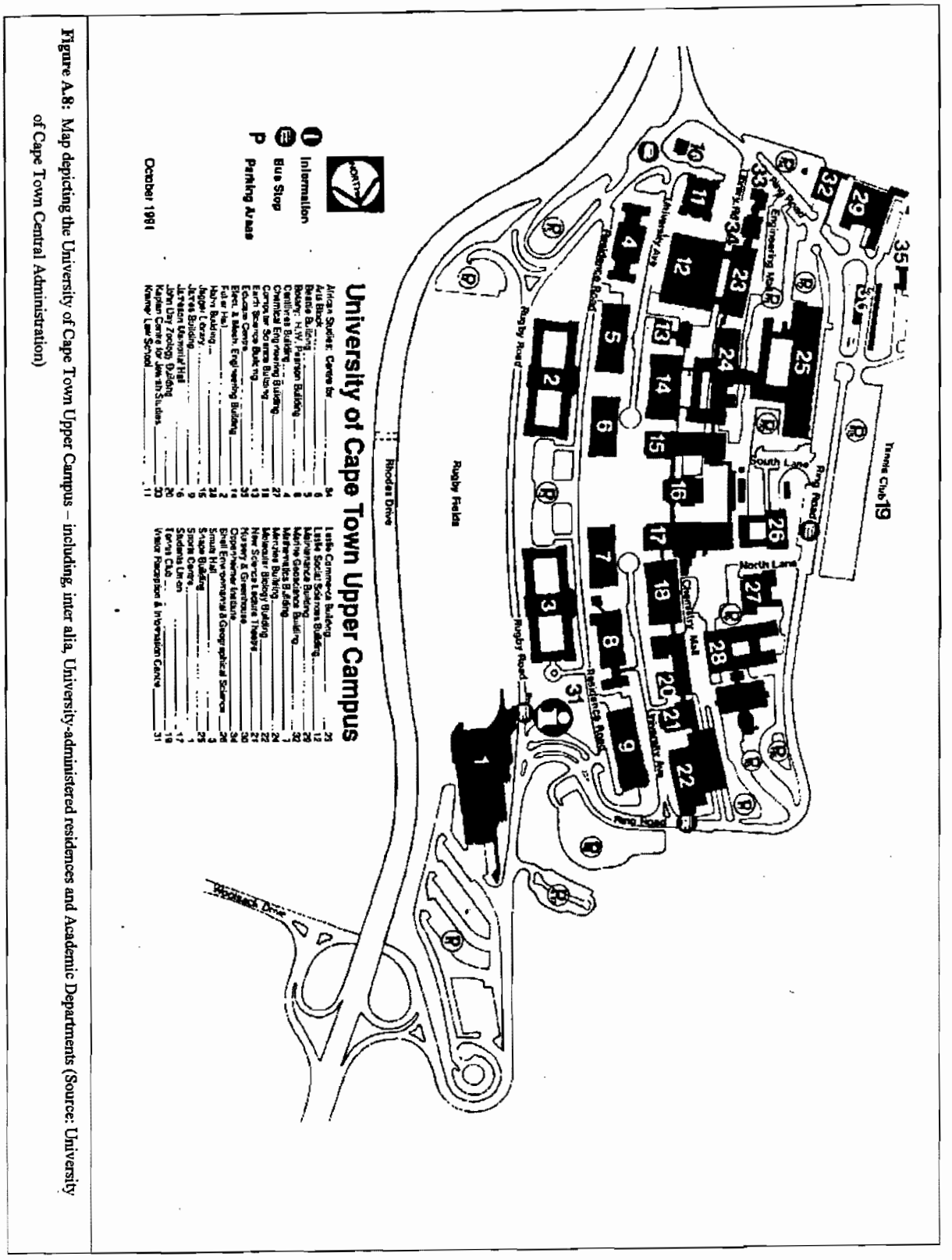


Figure A.8: Map depicting the University of Cape Town Upper Campus – including, inter alia, University-administered residences and Academic Departments (Source: University of Cape Town Central Administration)

(i) Sites on Upper Campus relevant to the UCT-SHS study:

A: Student services

12: Leslie Social Sciences Building – home of the Academic Development Programme (UCT-ADP) and the Alternative Admissions Research Project (AARP).

17: Otto Beit Students Union Building – home of the Student Development and Services Department (UCT-SDSD) together with the Student Advice and Development Centre (UCT-SADC) and the Undergraduate Financial Aid Office (UCT-UFAO).

B: Services and academic departments relevant to the conduct of the UCT-SHS study

18: Computer Science Building – home of the Information Technology Service (ITS) where clinical data was transferred from hard copy to diskette format (courtesy of Mr Roger Haylett).

24: Menzies Building – home of the Information Technology Service (ITS) of Geographic Information Systems (GIS) Training Room where UCT-SHS study results for the residence (home address)-specific variable were transposed into the Postal Code Grouping (PCG)-specific geocoded map appearing in the Results chapter (courtesy of Mr Nick Lindenberg).

26: Shell Environmental and Geographical Science Building – home of the Department of Environmental and Geographical Science where the Postal Code Groupings (PCGs) employed in the residence (home address)-specific variable were superimposed onto the Technical Management Services (TMS) map of the individual suburbs of metropolitan Cape Town (courtesy of Mrs Shirley Butcher).

28: P.D. Hahn Building – home of the Department of Psychology where data transformation and the majority of statistical analyses were performed (courtesy of Mr Frank Bokhorst).

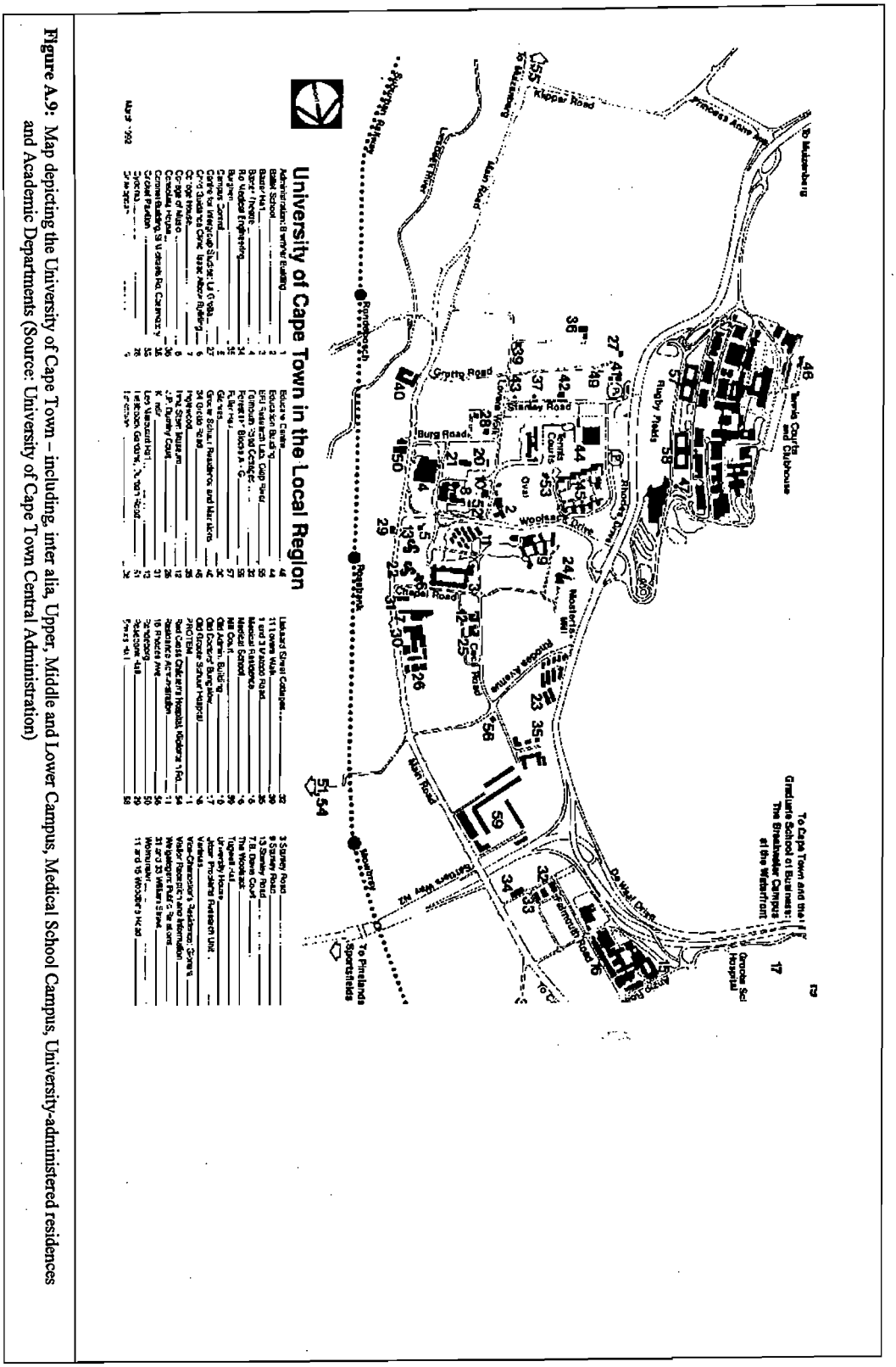


Figure A.9: Map depicting the University of Cape Town – including, inter alia, Upper, Middle and Lower Campus, Medical School Campus, University-administered residences and Academic Departments (Source: University of Cape Town Central Administration)

(ii) Further sites on the various University of Cape Town campuses relevant to the UCT-SHS study:

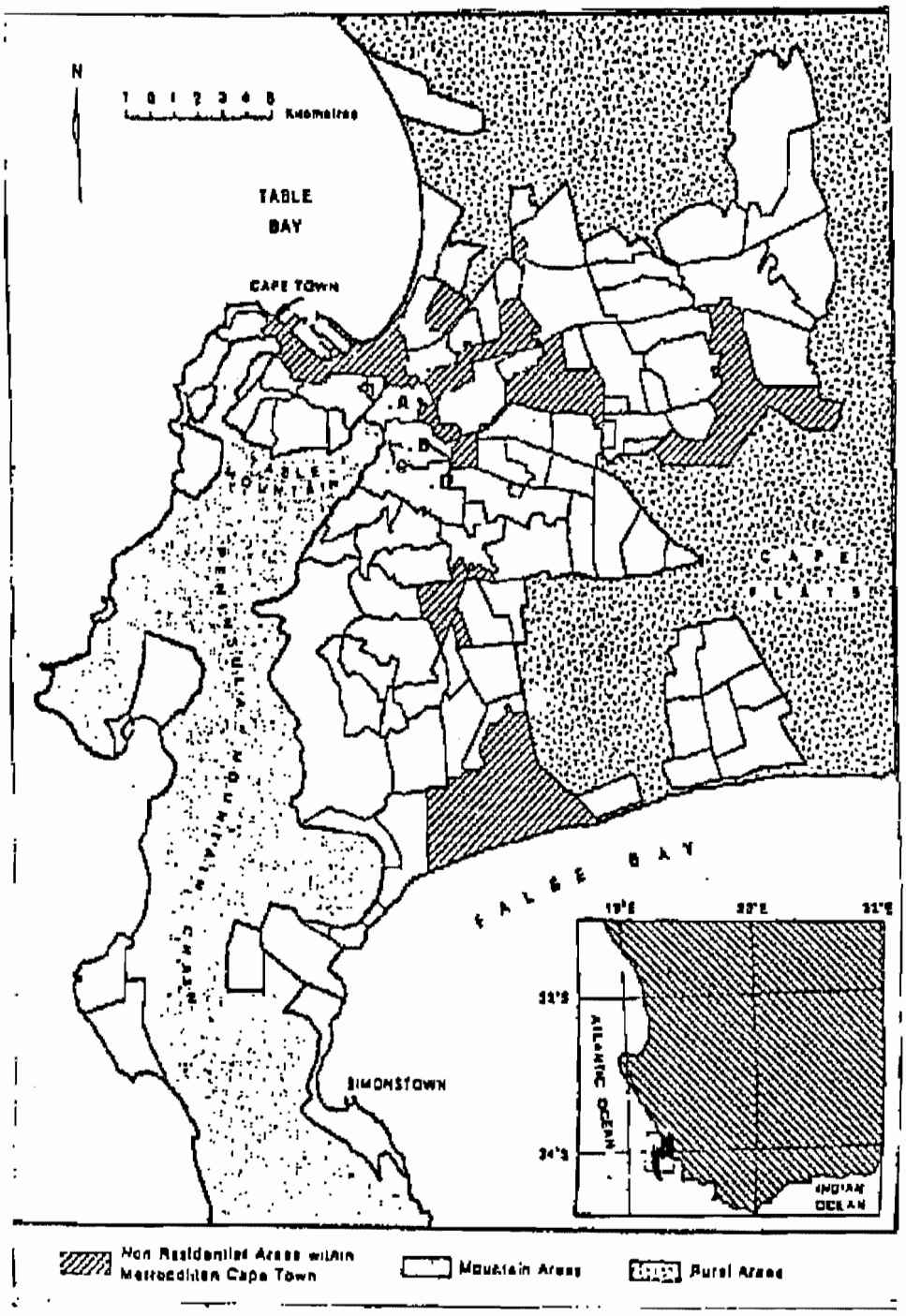
A: Student services

11: Protem Complex – home of the Student Housing Office (UCT-SHO) and the Student Health Service (UCT-SHS) which is the source of study patients and controls.

B: Services and academic departments relevant to the conduct of the UCT-SHS study

18: Old Groote Schuur Hospital – home of the Department of Psychiatry where the candidate received assistance and supervision during the course of conducting this research (courtesy of Professor Alan Flisher). In addition, students registered at the Health Sciences faculty (formerly the Faculty of Medicine) who do not wish to travel to the UCT-SHS-MHS for evaluation and/or therapeutic intervention for psychological or psychiatric complaints often attend the Psychiatry Outpatients Department which is also housed here.

Figure A.10 Map depicting the University of Cape Town and institutions associated with the UCT-SHS study on a geocoded map of metropolitan Cape Town (adapted from Rip, Keen and Kibel, 1986)



KEY

A - Groote Schuur Hospital (Observatory)
B - UCT Lower Campus - Protem Complex (Rondebosch/Rosebank)
C - UCT Upper Campus (Rondebosch)
D - William Slater Hospital (Rondebosch)

(iii) Further sites on the various University of Cape Town campuses and related institutions relevant to the UCT-SHS study:

A: Services and academic departments relevant to the conduct of the UCT-SHS study

[D]: William Slater Hospital which houses an adolescent psychiatric counselling centre which is attached to the UCT Department of Psychiatry. The occasional UCT student is referred there for further evaluation and/or therapeutic intervention – especially near examination time.

It is noteworthy that all the institutions, services and academic departments relevant to the UCT-SHS study lie within a circa 3 kilometre radius of each other – thereby permitting, if necessary, a high degree of accessibility between them.

APPENDIX X

Background management, psychological and sociological considerations relevant to specific recommendations – additional material to that appearing in section 6.4.

(a) Health management and planning concepts

(b) Prevention of mental illness

(c) Principles of behavioural modification

This appendix functions to briefly outline various background management, psychological and sociological considerations that are relevant to the specific recommendations documented in the Discussion chapter. It is important to realise that a multitude of factors may influence not only management-related decision-making by relevant University authorities responsible for the implementation of various preventive interventive strategies to reduce the prevalence of mental disorders in the total student community but also the willingness of the individual student to accept the preventive interventive strategy that is being provided by the aforementioned University authorities. This selection of three different perspectives covers the above process, viz. health management and planning concepts outlined in Appendix Xa relate to University authorities, prevention of mental illness documented in Appendix Xb relates to the actual preventive strategy/ies to be implemented while the complex but highly relevant material overviewing the principles of behavioural modification in Appendix Xc relates, inter alia, to methods of increasing the receptiveness of the student audience to the proposed preventive interventive strategy.

APPENDIX Xa

Health Management and Planning Concepts

This appendix introduces concepts that are relevant to the general practice of epidemiology and relates them to the UCT-SHS study.

(i) Health systems research

Mathews (1992) states that in the past the appropriate term was health services research, but now health and health services have come to be seen in a much broader social, cultural, and economic context, and the interrelated parts of this context are considered to constitute a health system. The role of this research is to facilitate health action, to generate new understandings, and to inspire fresh interventions.

The UCT-SHS study by investigating UCT-SHS-MHS attendance patterns, utilisation patterns for various sectors of the student community (as measured by usage rate per 1 000 students) and the average number of consultations required by the various sectors of the student community fulfils the role of health systems research. These sectors of the student community are determined by classifying individual students according to selected demographic, academic, residential (home address) and financial assistance variables which include both direct and indirect measures of various social, cultural and economic factors. This aspect of the UCT-SHS study is further discussed in the following subheading defining health indicators and relating them to the objectives of this study. In addition, subsequent subheadings outlining specific health management and planning concepts, and how they relate to the UCT-SHS study, document, in some detail, the role of this research in facilitating health action, generating new understandings and inspiring fresh interventions amongst, inter alia, relevant University authorities.

(ii) Health indicators

WHO (1980) quoted by Katzenellenbogen (1990) states that health indicators assist in the identification and quantification of health problems. Since health status is dependent on socio-economic factors, health indicators may provide insight beyond the health status of populations: they often reflect socio-economic development, exposure to specific risks, health service access and utilisation, and other factors that impinge on health in the population. Katzenellenbogen continues by commenting that in identifying the magnitude of health problems, such indicators assist in the establishment of priorities and in decision-making concerning the allocation of resources. This often provides the necessary stimulus to new, improved strategies.

The UCT-SHS study will provide a series of results that can function as a set of student-specific health indicators pertaining to the University of Cape Town which will assist in the identification and quantification

of mental health problems amongst the student community. Factors such as race/population group (a variable employed in this study), due to the legacy of apartheid can often function as an indirect measure of socio-economic factors influencing large sections of the student community. In addition, the variable detailing financial aid eligibility and value (which is dependent on student and/or parental income) is another more specific measure of socio-economic conditions affecting students at the University of Cape Town – many of whom are affected by various psychological or psychiatric complaints. Part of the aim of this study is to identify risk factors predisposing students to (various categories of) mental disorders so that appropriate interventive programmes can be instituted by relevant University authorities to ameliorate problem areas highlighted in this research and, thereby, promote the mental health and general well-being of the entire student community.

(iii) Systematic planning

Reddy, et al. (1995) state that systematic planning comprises an assessment of the magnitude and seriousness of the problem, an analysis of the behavioural risk factors, a study of the determinants of behaviour and designing, implementing and evaluating the intervention. Spenser (1985) expands on this definition by amplifying the role of intervention by commenting that there is frequently an urgent need for information to facilitate decision-making processes for feedback and review, establish goals, set objectives, identify and analyse problems, choose between alternative strategies and predict appropriate resource supply.

These definitions/descriptions of systemic planning encompass not only the basic principles of epidemiology previously outlined but also significantly expand upon the interventive phase by describing, in some detail, the steps that must be taken by relevant University authorities to implement appropriate programmes (such as, inter alia, health education programmes, various academic and non-academic assistance programmes) to reverse risk factors that have been demonstrated by this study to predispose certain students to various psychological and/or psychiatric complaints. This interventive process is a multi-faceted one initially involving a thorough assessment of circumstances relating to both the student community and University administrative departments and student service-orientated facilities that could be causally associated with reported trends and risk factors followed by a setting of both realistic and appropriate goals and objectives as how best to rectify various problem areas previously highlighted in the initial phase.

(iv) Situation analysis

Hartshorne, et al. (1995b), incorporating World Health Organisation material – (WHO) (1976) and WHO (1989), state that the situation analysis phase gives a detailed description of the existing health system. The gathering and processing of comprehensive information is therefore a focal point and is analogous to what is called "community diagnosis". It is important to obtain a thorough understanding of the dynamics of the demographic, socio-economic, geographic and environmental factors related to the health care delivery system such as structure, function and administrative processes, policies, programmes, infrastructure, resources and

also service activity description. This information is also required for identifying positive (enabling factors) and negative forces (constraints) in the current system or situation and to direct health care planners in the development and management of appropriate strategies and programmes to improve health. In essence the situation analysis is stocktaking of the present situation and recent past trends to facilitate identification of problems, constraints and opportunities, the needs to be met in order of priority, the objective to be met, and to direct efforts towards appropriate strategies to improve health.

The description of the scope of the situation analysis encompasses not only the basic principles of epidemiology previously outlined and the definition/description of systematic planning outlined above but also places considerable emphasis on knowing the strengths and weaknesses in both structure and function of relevant University departments involved in designing and implementing various programmes to reverse risk factors that have been demonstrated by this study to predispose certain students to various psychological and/or psychiatric complaints. The UCT-SHS as the official University health care delivery system would be one of the University departments that could be subject to a situation analysis involving, inter alia, assessment of processes, policies and programmes directed toward mental health issues – such as current therapeutic regimes, health education and prevention programmes and resource allocation. Positive (enabling factors) in the current system would include motivated, qualified and experienced counsellors while negative forces (constraints) in the current system would include budgetary restrictions severely limiting any outreach programmes. An appropriate means of performing the situation analysis would be to conduct a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis which would enable UCT-SHS (MHS) staff to implement appropriate strategies to overcome stated weaknesses and pre-empt stated threats, thereby enabling them to deliver a better service to the student community in order to reduce the incidence of mental illness on campus.

(v) Problem identification

Hartshorne, et al. (1995b) state that problem identification is defined as the difference between the existing state and the desired state. A review of the results of the situation analysis is important to enable the determination of relative needs for intervention and to set priorities for courses of action. Basic health problem areas are recognised by comparing the results with stated health indicators or goals. This description of the role of problem identification provides a further step in the health planning/management decision-making process insofar as this step follows the situation analysis phase outlined above which, in turn, can be a by-product of a systematic planning exercise.

In other words, any systematic planning exercise aimed at improving the quality of student mental health, by reversing risk factors associated with psychological or psychiatric complaints, would depend heavily on research findings outlining the magnitude and seriousness of the problem. Part of the solution to improving the status of student mental health would have to involve a situation analysis of the structure, function and resources available to the UCT-SHS-MHS and all other relevant University student service-orientated facilities,

before appropriate goals and objectives could be devised for an interventive programme. The rectification, where possible, of any shortcomings or deficiencies exposed in any of these University facilities (especially the UCT-SHS-MHS) during the problem identification phase would constitute an important component of any interventive programme. The results of this study could provide relevant University authorities with stated health indicators to enable them to devise appropriate goals and objectives for possible future interventive programmes.

(vi) Concluding comments

As previously mentioned, the UCT-SHS study will endeavour to provide relevant University authorities with data that could be employed to benefit the entire student community. This data should be of interest to several University student service-orientated departments – the UCT-SHS itself, the Student Advice and Development Centre (UCT-SADC), the Undergraduate Financial Aid Office (UCT-UFAO), the Student Housing Office (UCT-SHO) and the Academic Development Programme (UCT-ADP). In order for these University departments (together with the student community they serve) to derive maximum benefit from the results of the UCT-SHS study, it is important to consider how the principles outlined in this appendix are relevant to each of these individual departments. It is distinctly possible that these principles are not uniformly applicable to the UCT-SHS, the UCT-SADC, the UCT-UFAO, the UCT-SHO and the UCT-ADP as different circumstances – relating to function, organisational structure, staffing and ethos – pertain to each of these University departments (refer to Appendix VII for further details). Therefore, the relevant authorities associated with each of these departments will adopt differing systematic planning initiatives based on UCT-SHS study results, differing situation analyses based on pre-existing delivery systems and differing problem identification strategies based on pre-existing departmental goals. Consequently, it is possible that these different University departments might not consider certain UCT-SHS study research findings (and associated trends) from the same perspective due to the principles outlined in this subheading thereby leading to potential variations in interpretation of the same result.

APPENDIX Xb

Prevention of mental illness

> *Health promotion prevention seeks to promote health by building knowledge and skills among individuals and by modifying environmental structures and processes. Intentionality prevention programs require a highly intentional design process, from assessing formal needs to evaluating results of the intervention. Collaboration and empowerment prevention programs typically involve members of constituent populations at all phases of the intervention process, from design through implementation and assessment.*
>
> *These precepts further serve to highlight what prevention is not. Scarce resources of time, staff, and money often lead health services to limit outreach efforts to such "single shot" interventions as residence hall presentations. Although these interventions may form part of an intentional program of primary prevention, the sequential conduct of unrelated talks does not constitute a preventive program. Prevention is a long-term, team-centered commitment to a campus community, not an uncoordinated accretion of brochures and presentations.*
>
> (Steenbarger et al., 1995: p. 158)

This statement provides an eloquent overview to the field of prevention which is explored in this appendix. The authors rightly place great emphasis on the role of meticulous planning in order to make maximum benefit of limited resources. This strategy is particularly relevant to the setting of the University of Cape Town where all University departments, including the UCT-SDSD (Student Development and Services Department), have been forced to exercise tight financial control of shrinking budgets. Therefore it is imperative that any preventive programmes undertaken must be focused on achieving maximum impact from, preferably, minimal expenditure.

This appendix commences with a brief overview of a few theoretical frameworks advanced by various authors addressing this topic. This material serves to introduce a range of more specific strategies that have also been described in terms of the community psychology approach (Lewis and Lewis, 1977) previously outlined in section 2.2. In defining the different types of preventive strategies that could be employed to reduce the prevalence of mental disorder, De Armond et al. (1973) report that primary prevention seeks to reduce the occurrence of new cases of emotional disturbance, while secondary prevention seeks to decrease the duration of cases through early detection and treatment and tertiary prevention seeks to reduce the rate of residual deficit which can occur with emotional disturbance. However, preventive measures in student mental health, according to Parnell (1951), need not and should not pay too much attention to individuals. They should not: (i) involve healthy young men in routine psychoanalysis; (ii) "stir up the mud" unnecessarily; (iii) provoke

hypochondria or encourage introspection, and (iv) sap self-reliance or engender a feeble and dependent state of mind.

(i) Selected theoretical frameworks

The three individual frameworks included in this subheading, although they originally addressed a widely divergent set of health-related issues – general student mental health (Morrill, Hurst and Oetting, 1980), alcohol and drug (substance) abuse (American College Health Association (ACHA) Task Force on Alcohol and Drugs (Substance Abuse), 1987) and topics such as sexually transmitted diseases, alcohol and drug abuse and acquaintance rape (Steenbarger et al., 1995), are all imminently suitable for use in the field of student mental health prevention.

In the first framework, Morrill, Hurst and Oetting (1980) have developed a conceptual model outlining three dimensions relating to the target, purpose and method of the preventive intervention to be applied in order to improve the mental health status of college/university students. This fairly elementary model does not provide specific details on how to implement such preventive strategies directed at achieving a reduction in the prevalence of mental disorders on campus. This is in contrast to the other two frameworks which are far more detailed in their approach. Nevertheless, this model, which is detailed in Table A.35, provides an appropriate stepping stone to those that follow it.

Table A.35 Outline of three dimensions employed in a preventive intervention strategy (adapted from Morrill, Hurst and Oetting, 1980).

(a) The target of intervention	
The individual	
The environments that influence the individual:	Primary groups
	Associated groups
	Institutions or communities
(b) The purpose of the intervention	
Remedial	
Preventive	
Developmental	
(c) The method of intervention	
Direct interventions by professionals or administrators	
Consultation and training of other helping professionals or paraprofessionals	
The use of media	

In the second framework, the American College Health Association (ACHA) Task Force on Alcohol and Drugs (Substance Abuse) (1987) compiled a comprehensive programme detailing both acute and chronic primary, secondary and tertiary preventive strategies that could be employed to reduce the prevalence of alcohol and drug abuse on-campus. This programme, which has been slightly amended to reflect mental disorders as the area of concern, appears in Table A.36. (A similar but less comprehensive strategy has

subsequently been released by the ACHA in their "Statement on College Alcohol and Drug Abuse", 1987.) It is an excellent example of a multi-disciplinary approach designed to combat a problem perceived, by relevant college/university authorities, to exist amongst students in a developed (first world) country.

Table A.36 University Mental Health Care Programme (adapted from American College Health Association (ACHA) Task Force on Alcohol and Drugs (Substance Abuse) (1987) with additional summaries by De Armond et al. (1973).

(a) Primary prevention	
Acute	**Chronic**
Providing general community health education	Providing general community health education
Providing individual patient education in connection with an individual's treatment in a clinic	Advocating changes in attitudes to mental health problems
Consulting with residence and other special interest groups	Assessing needs of and targeting programmes for special at-risk populations
Participating in campus policy development and deliberation	Training staff
Training staff, both in-service for health providers and, as appropriate, for those from other departments	Identifying treatment and consultation services and establishing contact with such agencies
[i.e. to reduce the occurrence of new cases of emotional disturbance (De Armond et al., 1973)]	
(b) Secondary prevention	
Acute	**Chronic**
Establishing emergency procedures in the health service for the college/university community	Performing routine screening (history taking)
Training staff to identify mental health problems and implement emergency procedures	Implementing case-finding activities
	Monitoring and following up students with mental health problems
	Making interventions resulting from students concerned about someone else's mental health (for example, another student, a loved one, parent(s), a professor)
	Referring appropriate patients for treatment
	Consulting with potential on-campus sources of referrals
	Training staff to make and handle referrals
[i.e. to decrease the duration of cases through early detection and treatment (De Armond et al., 1973)]	
(c) Tertiary prevention	
Acute	**Chronic**
Implementing a clinical follow-up system or protocol	Monitoring maintenance of mental health/wellness
Evaluating the effectiveness of clinical activities	Insuring continuity of care (referring patients for continued care – off-term, vacation and graduation)
Continuing a programme of staff training	
[i.e. to reduce the rate of residual deficit which can occur with emotional disorder (De Armond et al., 1973)]	

In the third framework, Steenbarger et al. (1995) assembled a detailed checklist outlining the steps involved in formulating and implementing a preventive programme. This checklist, like the preceding framework detailed by the ACHA Task Force, is a comprehensive programme which, although it has been designed as a non-specific tool, should fulfil an important role in the field of student mental health. It is designed as an organisational flow chart covering the assessment, design, implementation and evaluation phases of the preventive programme (refer to Table A.37). This is in contrast to the ACHA Task Force framework which is divided into eight segments encompassing the acute and chronic phases of primary, secondary and tertiary preventive strategies.

Table A.37 Checklist of steps involved in formulating and implementing a preventive programme (adapted from Steenbarger et al., 1975).

(a) Assessment	
Conduct needs assessments	Campus surveys
	Consultation with campus leaders
	Health centre use statistics
Determine problem parameters	Campus studies of prevalence, incidence
	Reviews of published research
	Consultation with experts
Determine available resources	Time, space, money
	Staffing resources
	Institutional support
(b) Design	
Assemble prevention team	Representatives from faculty, administration
	Representatives from campus helping groups
	Representatives from student body
Acquire needed resources	Health service resources: time, money, space, staff
	Institutional resources: money, space, staff
	Outside resources: grants, outside expertise
Specify goals	Specify goals and issues to be addressed
	Define desired outcomes in measurable fashion
	Define time frame for preventive programming
(c) Implementation	
Translation of goals into interventions	Educational interventions: media, groups, courses
	Persuasive interventions: media, workshops
	System-change interventions: ecological, consultation
Delegation of interventions to subgroups within team	Defining responsibilities and time frames
	Defining specific intervention goals and methods
(d) Evaluation	
Short-term evaluation	Evaluation of intervention process
	Evaluation of postintervention change
	Feedback of results to prevention team
Long-term evaluation	Evaluation of reductions in diseases, problems
	Evaluation of improvements in health
	Follow-up evaluations of interventions to assess maintenance of change versus relapse

(ii) Specific preventive strategies

The following are examples of preventive strategies detailed in the student-related literature that have been proposed to assist students in both developed (first world) and Southern African colleges and universities.

A: Reduction of alienation

Selikow (1994) notes that it is important that the University focuses on inter-racial relations and creating racial harmony on campus by setting up structures to facilitate integration and, thereby, reduce alienation. The development of formal and informal mechanisms such as racially mixed peer group or mentoring schemes to facilitate integration could be a possible step. Furthermore, it is important that formal and informal relations between students and staff are addressed. Mabena (1994) suggests that practical ways of resolving the problem of alienation may be to change the racial and gender composition of the staff and those in powerful positions in university government. This, the author states, would go a long way to making Black students feel accepted and understood.

This preventive strategy is compatible with the extensive experiential facet of community psychology proposed by Lewis and Lewis (1977).

B: Reduction of academic stress

Ragheb and McKinney (1993) suggest that, in order to reduce academic stress in students, campus recreation practitioners should plan programmes and environments to facilitate social-recreation pursuits: (i) student unions should be planned, equipped and furnished to function as they are intended: the family room of the campus; (ii) environments on campus should be designed leisurely to allow for social contacts, and (iii) informal libraries and settings should be made available to increase listening to radios, watching television and reading non-academic materials. (These recommendations followed research findings noting that students preferentially chose passive and recuperative leisure activities such as social activities – being with family and friends, dating, attending parties or dancing or mass media – listening to the radio, watching television or reading.) These findings are in line with those of Kabanoff and O'Brien (1986), who observed that higher stress in demanding jobs was also associated with passive, recuperative leisure attitudes and activities. Likewise, Sedlacek (1987) suggests that encouraging student union employees to offer more programmes aimed at students in general, and to specific groups such as Black students, might have a positive impact on student satisfaction with college/university life.

This preventive strategy is compatible with the extensive environmental facet of community psychology proposed by Lewis and Lewis (1977).

C: Student screening

Osborn (1967) observes that, although it can be a very time-consuming and costly process when large numbers of students are involved, screening of freshman/fresher students is premised on the philosophy that if emotionally troubled students can be identified, they can be seen in therapy before their problems grow more complex and hinder their academic achievement. Even if the screening process results in some students being called in who are not in need of treatment, the author suggests that there is potentially a benefit in that they have become acquainted with a facility to which they can return when future problems arise. This approach is in marked contrast to that of Parnell (1951) raised at the beginning of this subsection.

This preventive strategy is compatible with the intensive experiential facet of community psychology proposed by Lewis and Lewis (1977).

D: Student development programmes

Research by Dickens and Truax (1966), O'Leary (1969), Pappas (1976) and Spielberger, Weitz and Denny (1962) demonstrated that student developmental programmes outside the classroom could be designed to foster the personal and academic achievement of college/university students. In another such study, Walsh (1985) reports a student development programme conducted at Eastern New Mexico University employing a manual (Student Development Manual: A Comprehensive Orientation and Advising Experience – Walsh, 1979) specially designed for the programme. The manual and programme consists of six modules: (i) self-assessment and development, which assists students in understanding and developing their personal lives through various individual assessment inventories; (ii) academic planning and development, which enables students to plan their academic direction by helping them assess their academic interests and develop strategies to complete degree requirements; (iii) career planning and development, which helps students determine career alternatives or clarify current choices through the use of a career inventory; (iv) planning your schedule, which details the resources available at the university and various strategies for preparing class schedules; (v) decision making, which illustrates various ways and procedures helpful in making educational and life-pursuit decisions, and (vi) familiarisation with campus resources, which points out information about services available at the university for students and rules and regulations for students attending the university. The author notes that such a programme should be initiated during the orientation of new students as research reveals that students programme themselves for persistence or withdrawal during the first eight weeks of their collegiate/university life (Sheffield and Meskill, 1974).

This preventive strategy is compatible with the extensive environmental facet of community psychology proposed by Lewis and Lewis (1977).

E: Anticipatory guidance

De Armond et al. (1973) state that anticipatory guidance (initially developed by Janis, 1958, as a technique to help hospital patients handle the emotional crisis of major surgery) can be utilised in an effort in primary prevention as it encourages discussion about the feelings and stresses attendant on an impending crisis. This helps the student accept his/her feelings and begin to cope with the crisis before it occurs. The authors developed a slide tape module to "emotionally inoculate" students to the stresses of adjustment to university life – the module helps incoming freshmen/freshers recognise and accept their own feelings about coming to college/university, to know they are not alone in having these feelings and to begin to cope with and master the personal transition they will face.

This preventive strategy is compatible with the intensive experiential facet of community psychology proposed by Lewis and Lewis (1977).

F: Mentorship

Coelho, Hamburg and Murphey (1963) note that by actively seeking information from senior students (upperclassmen) new students are: (i) helped in learning new academic skills or improving standards of performance so as to meet institutional demands and personal levels of aspiration; (ii) helped in alternative pathways to personal fulfilment in the new situation and new bases for evaluating their potentialities; (iii) exposed to new aspects of themselves by suggestions of alternative acceptable uses of time and energy, and (iv) provided with emotional support, academic guidance and orientation. Such a programme has been successfully employed at the University of the Western Cape (Year Report, 1995 and 1996).

This preventive strategy is compatible with the intensive experiential facet of community psychology proposed by Lewis and Lewis (1977).

G: College/University Companion Programme

McCarthy, Wasserman and Ferree (1975) describe the development of an innovative peer-counselling programme initiated at American University, Washington, D.C. Students are recruited by the Counseling Center and receive paraprofessional training to prepare them to serve on either a student-operated telephone crisis intervention and referral service (basic programme) or the Companion Program (advanced programme). For the latter, the following characteristics are sought: (i) warmth; (ii) genuineness; (iii) empathy; (iv) self-disclosure; (v) listening skills; (vi) role-playing ability; (vii) ability to give feedback, and (viii) ability to learn from training. Companions are trained in skills of: (i) handling the initial contact; (ii) doing behavioural rehearsal; (iii) giving feedback; (iv) problem solving; (v) goal structuring, and (vi) termination. Problems discussed (and handled) include: (i) social, assertive and study skills training; (ii) handling depression, and (iii) dealing with crises.

This preventive strategy is compatible with the intensive experiential facet of community psychology proposed by Lewis and Lewis (1977).

H: Health questionnaire

Cowan and Morewitz (1995) report that the use of a brief questionnaire administered to students in the student health service waiting room did increase the chance that the students and their doctors would discuss the students' psychosocial concerns (such as anxiety and depression) in the course of everyday medical consultations. Therefore, the authors suggest, such a questionnaire could prove a valuable means for identifying psychosocial concerns significant enough to require treatment or further evaluation. Such a short questionnaire can be easily tailored to the student population served and allows more complete healthcare to be provided for college/university students.

This preventive strategy is compatible with the extensive experiential facet of community psychology proposed by Lewis and Lewis (1977).

I: Consultation

Pinkerton (1994) notes that students often use a mental health service to consult with a professional regarding a fellow student about whom there is concern. This may occur in several forms: (i) one student seeking consultation regarding another student; (ii) one student seeking consultation regarding a group of students; (iii) a group of students requesting help in dealing with one student, and (iv) a group of students requesting guidance in working with another group of students. Client-centred case consultation occurs when the consultant makes a direct assessment of the client and then proposes an appropriate recommendation to the consultee.

This preventive strategy is compatible with the intensive environmental facet of community psychology proposed by Lewis and Lewis (1977).

J: Evaluation of preventive strategies

Reifler and Liptzin (1969) state that, in order to be able to adopt a rational approach toward the planning and execution of prevention programmes it is crucial to possess an equally rational approach to the evaluation of such programmes. The authors note that, all too often, programmes are planned and executed based on a priori judgements, unproven theory or often just because they seem like reasonable things to do. Most institutional practices have been developed in this manner and, although many of them seem quite successful, there is only the most anecdotal and impressionistic information concerning either the effect or the effectiveness of these programmes.

This preventive strategy is compatible with the extensive environmental facet of community psychology proposed by Lewis and Lewis (1977).

APPENDIX Xc

Principles of behavioural modification

In order for the preventive strategies outlined in Appendix Xb to be implemented, it is important that relevant University authorities charged with implementing such interventions have a firm understanding of the dynamics associated with the type of behavioural modification that is required in order to promote, inter alia, health seeking behaviour in students affected by psychological or psychiatric complaints. This knowledge would, therefore, seem essential before any intervention is undertaken to reduce the prevalence of mental disorders on campus. This is the rationale for including this important material which also serves to link the preceding Appendices – which outline University administrative departments and student service-orientated facilities directly or indirectly linked to the UCT-SHS-MHS that are potential beneficiaries of this research, health management-related principles relevant to the conduct of the UCT-SHS study and general preventive strategies that could be implemented to reduce the prevalence of mental disorders on campus – to the specific recommendations that are documented in Chapter 6.

This appendix, which attempts to provide a suitably broad overview of the possible relationship between stress, the Health Belief Model, communication strategies and the above prevention strategies, commences with a conceptual framework outlining the components of organisational stress (Strümpfer, 1983, quoted by Porter, 1988). This framework will be employed to demonstrate the aetiology (causative factors) and pathogenesis (promoting factors) of stress affecting students attending the University of Cape Town in a more holistic and theoretical manner than previously detailed in either the Literature Review or the Discussion chapter. It is important to realise that, in the setting of this study, UCT fulfils the role of the organisation while the student fulfils the role of the worker who, because of the often intense pressure associated with the academic demands of a tertiary education, functions as a de facto shift worker being subject to the attendant high stress levels associated with this nature of work. It is, therefore, very important to consider these causative and promotive factors as well as potential enabling factors and their implications for health care before recommendations are formulated that may be highly inappropriate to student-specific factors in an academic environment.

This appendix continues with a conceptual framework which details the Health Belief Model for explaining and predicting the acceptance of health and medical care recommendations (Becker, Drachman and Kirscht, 1977, quoted by Wadlow, 1992). A further more comprehensive framework representing public health, clinical and social psychological approaches to the prediction and understanding of behaviour devised by the developers and/or leading proponents of the Health Belief Model (Becker, 1974 and 1978; Janz and Becker, 1984 – refer above), Social Cognitive Learning Theory (Bandura, 1986 and 1991), the Theory of Reasoned Action (Ajzen and Fishbein, 1980), the Theory of Self-Regulation and Self-Control (Kanfer, 1970 and 1987), and the Theory of Subjective Culture and Interpersonal Relations (Triandis, 1972 and 1977) is also included. These frameworks will be employed to explain the various perceptions that are entailed before a student even

considers accepting medical care – including attending the UCT-SHS-MHS for evaluation and/or therapeutic intervention for a potentially debilitating psychological or psychiatric complaint that may be the direct consequence of organisational-type stress. It is, therefore, also very important to consider these additional perceptions and their implications for the provision of health care before formulation of recommendations that may, yet again, be highly inappropriate to existing student perceptions and sensitivities.

This appendix concludes with a conceptual framework describing the components of persuasive communication (McGuire, 1974, in Rimer and Glassman, 1984, quoted by Wadlow, 1992). This framework will be employed to highlight suitable strategies that can be used by relevant University authorities not only to increase the receptiveness of the student audience to proposed interventive strategies but also to increase their willingness to adopt behavioural changes or undertake remedial actions (such as attending the UCT-SHS-MHS) that will enhance their mental health.

(i) Components of organisational stress

This model of the six components of organisational stress formulated by Strümpfer (1983) has been employed as a conceptual framework by Porter (1988) in her thesis investigating work schedule stress and wellness in female air cabin attendants. This framework (with minor modifications) – which is imminently applicable to a tertiary educational institution – will be employed in this subdivision.

A: Cultural antecedents

Cultural antecedents are defined as the systems and situations within which humans exist and have a definite and strong influence on their experiences in life. Humans are a product of their life which is an accumulation of a multitude of factors, events, organisations and people that operate to shape what Beck et al. (1982) have termed "operating assumptions, value systems and world views".

B: Organisational stressors

The often intense academic demands of university life constitute the prime organisational stressor affecting students. However, the impact of these demands is further influenced and perhaps conditioned by other organisational (university-specific) variables and stressors. Academic variables would include faculty, level of study and year of study, residential variables would include proximity to home and family support structures and financial assistance variables would include eligibility and (where appropriate) value of financial aid. Stressors would entail, inter alia, unfavourable relationships with lecturers, course difficulties and problems with fellow students or family members.

C: Reactions

The nature of the work schedule adopted by (or thrust upon) students may produce a variety of effects/reactions leading to varying levels of discomfort. Monk and Tepas (1985) note that such discomfort "can range from slight feelings of malaise and social inconvenience to major medical problems and domestic distress" which would (or should) often require evaluation and/or therapeutic intervention at the UCT-SHS-MHS (or elsewhere).

D: Consequences

Physical and/or psychological/psychosocial complaints, even if successfully treated, cause considerable morbidity to students. If left unattended, these conditions could severely impair the student's scholastic abilities leading to underachievement, repeated years of study or even, at worst, exclusion from the University on academic grounds.

E: Conditioning variables

Variables which enhance or reduce the relationship between a stressor and its consequence have been referred to as conditioning, moderator, buffer or intervening variables. Intervening variables affecting students (who often function as shift workers by proxy) would include, inter alia, housing conditions (especially sleeping conditions), family status (age of children, acceptance of studentry by family), marital status, cultural background, age and gender (Kogi, 1985, Jamal, 1981).

Social support, which is an important buffer variable, is defined by House (1983) as involving the flow between people of emotional concern, instrumental aid, information or appraisal. This support can emerge from a variety of sources, ranging from friends and acquaintances, to family and more distant relatives, subordinates, peers and superiors (House, 1981; Shamir and Solomon, 1985; Williams and House, 1985). Research conducted by French (1973), Cobb (1976) and La Rocco et al. (1980) provides strong evidence in support of the buffering effect of social support including the association between stress and mental and physical health outcomes such as anxiety, irritation and somatic symptoms.

F: Coping

As effectively functioning individuals, humans are equipped with a range of resources to attempt to cope with the demands of life. This coping refers broadly to efforts to manage environmental and internal demands and conflicts between these demands. Coping is multifaceted and health outcomes are a product of effective coping rather than simply a consequence of the presence or absence of stress (Holroyd and Lazarus, 1982). Pearlin and Schooler (1978) note that coping refers to the things people do to avoid being harmed by "problematic

social experience". Individuals cope in various ways, according to their resources and predispositions, inter alia, with diverse individual differences in the coping process being evident in both the perception of, and reactions to the stress at hand, with the efficiency of such coping strategies obviously being dependent on the multivariate factors involved (Murphy, 1985).

(ii) The Health Belief Model

This model for explaining and predicting acceptance of health and medical care recommendations formulated by Becker et al. (1977) has been employed as a conceptual framework by Wadlow (1992) in her thesis investigating conditions for health behaviour change. This framework (with minor modifications) will be employed in this subdivision (also refer to Figures A.11 and A.12 for further details).

A: Perceived susceptibility

This dimension refers to the individual's subjective perception of the risk of contracting a condition. Individuals vary widely in their feelings of personal vulnerability to a condition.

B: Perceived severity

This dimension includes evaluations of both medical/clinical consequences (e.g. disability and pain) and possible social consequences (e.g. effects of the conditions on work, family life and social relations) of contracting an illness.

C: Perceived benefits (effectiveness of the precaution)

This dimension refers to individual beliefs regarding the effectiveness of the various actions available in reducing the disease threat. These beliefs define the particular course of action that was likely to be taken by an individual who has accepted his/her personal susceptibility to a condition also believed to be serious. Thus a "sufficiently threatened" individual would not be expected to accept the recommended health action unless it was perceived as feasible and efficacious.

D: Perceived barriers (costs of adopting the precautions)

This dimension refers to the potentially negative aspects of a particular health action that may act as impediments to undertaking the recommended behaviour. A kind of cost-benefit analysis is thought to occur wherein the individual weighs the effectiveness of the action against perceptions that it may be expensive, dangerous, unpleasant, inconvenient, time-consuming and so forth.

E: Cue to action

This dimension refers to the fact that some stimulus is necessary to trigger the decision-making process. This "cue to action" might be internal (that is, symptoms) or external (for example, mass media communications or interpersonal interactions) (Janz and Becker, 1984). These are evaluated and incorporated into the person's decision to act (Kirscht, 1974, in Croog and Richards, 1977).

F: Other factors

This dimension refers to the assumption that diverse demographic, sociopsychological and structural variables might, in any given instance, affect the individual's perception and thus indirectly influence health-related behaviour (Janz and Becker, 1984). Demographic, social, structural and personality factors are included in some versions of the model as modifying factors (Becker et al., 1972) since in theory they indirectly influence actual behaviour.

Figure A.11 The Health Belief Model (from Becker and Malman, 1975, quoted by Wadlow, 1992).

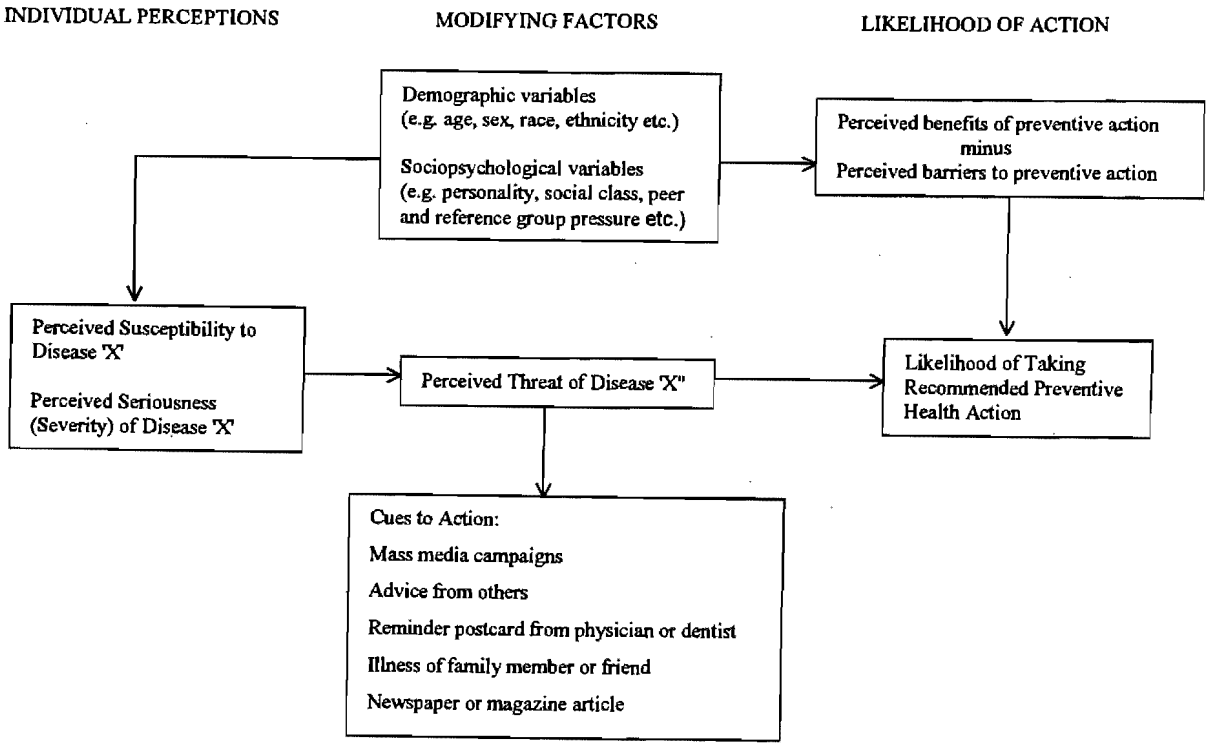
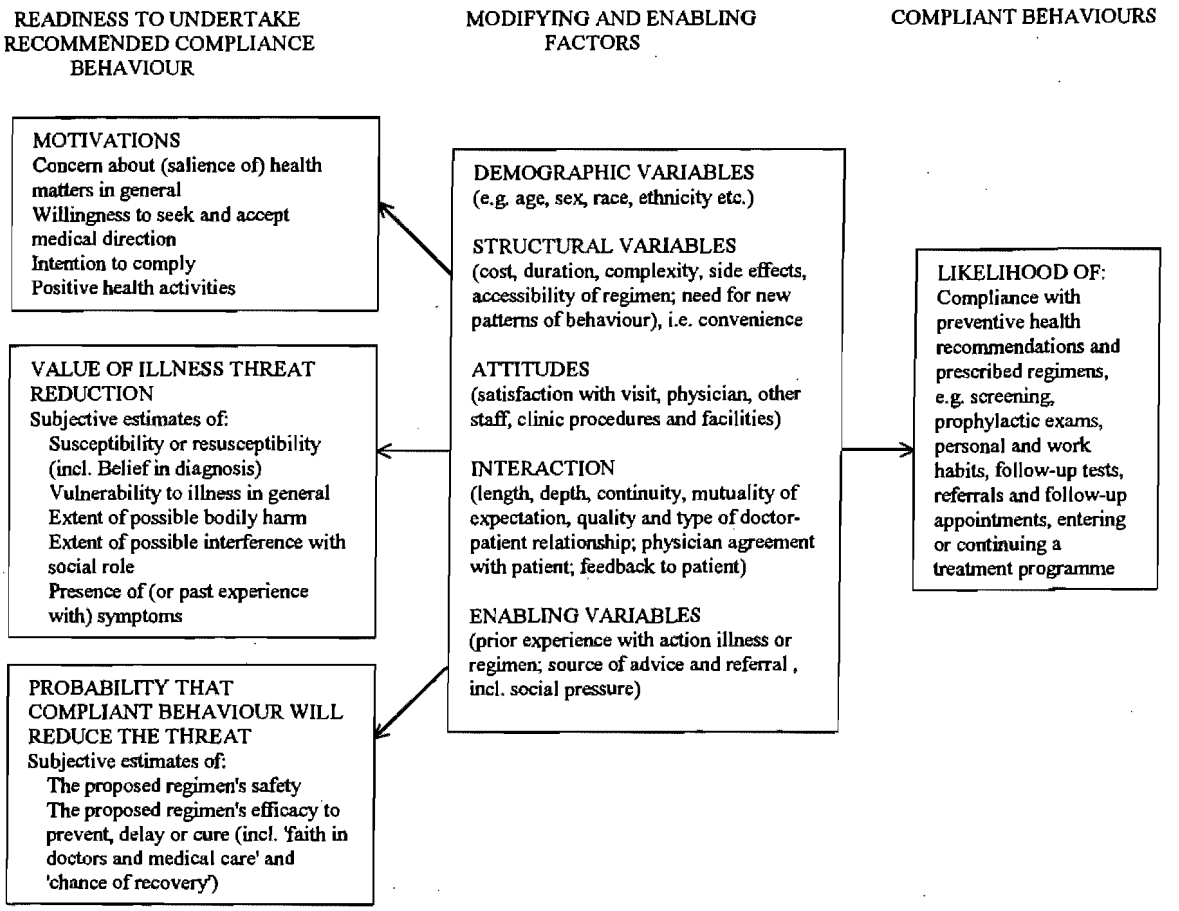


Figure A.12 The Health Belief Model (from Becker and Malman, 1975, modified by Wadlow, 1992).



(iii) Factors influencing behaviour and behaviour change

This comprehensive framework devised in a workshop in Washington in 1991 which employs public health, clinical and social psychological approaches to the prediction and understanding of behaviour (Fishbein et al., 1991) has been employed as a conceptual framework by Vergnani (1999) in her thesis investigating factors influencing condom usage among high school students in the Cape Town metropolitan area. This framework (with minor modifications) will be employed in this subdivision.

The following limited number of variables function as potential determinants of any given behaviour (e.g. attendance at the UCT-SHS-MHS for underlying psychological or psychiatric complaints) insofar as said behaviour is more likely to occur if:

A: The person has a strong positive **intention** to perform it.

B: Constraints, either external or internal to the person, do not make the behaviour difficult to achieve (**environmental constraints**).

C: The person has the necessary skills to perform the behaviour (**ability**).

These variables are necessary and sufficient for a behaviour to occur.

D: The perceived advantages outweigh the perceived costs, i.e. the person has a positive attitude toward performing the behaviour (**anticipated outcomes**).

E: The person perceives more social/normative pressure to perform the behaviour than not to perform the behaviour (**relevant referents**).

F: The person perceives the performance of the behaviour to be consistent with his/her self-image (**self-standards**).

G: The person's emotional reaction to performing the behaviour is more positive than negative (**emotions**).

H: The person perceives that he/she has the capabilities to perform the behaviour under a number of different circumstances (**self-efficacy**).

These variables influence the direction and strength of intention but can also directly influence behaviour.

(iv) Communication strategies

This model of the five major components of persuasive communication formulated by McGuire (1974), quoted in Rimer and Glassman (1984), has been employed as a conceptual framework by Wadlow (1992) in her thesis investigating conditions for health behaviour change. This framework (with minor modifications) will be employed in this subdivision.

A: Source variables

The influence of who gives the message depends on how acceptable that source is to the receiver. The acceptability of the source depends on the receiver's perceptions of how credible, powerful, attractive, and unbiased the source appears to be. The more acceptable the source, the more effective the message. Receiver perceptions regarding the source can be influenced by: (i) the selection of the source; (ii) the context of the message; (iii) symbolic and overt references; (iv) the content of the message, and (v) other factors. Implicitly, there are more and less influential ways of selecting and presenting the source of different types of receivers and different target behaviours (Winett, King and Altman., 1989). The diffusion and acceptance of new information imparted by an active change agent (health educator) has been found to depend on the extent to which the people they are attempting to persuade regard them as credible, trustworthy, knowledgeable, attractive and similar to themselves with respect to basic beliefs, values and experiences of life (McGuire, 1968). Thus, it is less important that the change agent possesses any of these qualities objectively than it is that he/she is perceived to possess them by the people they are attempting to persuade (Berkanovic, 1976). According to Rogers and Shoemaker (1971), quoted in Winett, King and Altman (1989), change agents are more likely to be credible if their programmes fit the client's cultural beliefs and values.

B: Message variables

The goal of persuasive communication is to get the target population to believe the message, perhaps even act upon it. A communication that succeeds in being persuasive is not only understood by the target population, but is also believed, appreciated and valued. The study of persuasive communication seeks to find out just how to present messages most effectively to persuade the largest number of people to take a specific action (Winett, King and Altman., 1989). Before bombarding people with facts, their interests, goals, health belief systems and current level of understanding should be assessed and taken into account. Unless the information is relevant to a value or goal the client regards as important, its impact will be minimal, regardless of the quality of its presentation (Hollis, Connor and Matarazzo, 1982). Success in promoting healthy behaviour may depend in part on the appropriate "framing" of the promotional message – that is, altering the language that information is couched in without changing the substantive information contained in the message (Quadrel and Lau, 1989). The style, content and organisation of the message is an important aspect of persuasive communication. Persuasion is defined by the presentation of arguments, and the accumulated research in social psychology has generally supported the view that increasing the number of arguments in a message enhances its persuasive impact (Maddux and Rogers, 1980). Petty and Cacioppo (1984) have shown that the mere quantity of arguments rather than their quality may serve to persuade people to change their opinions, perhaps by enhancing issue-relevant thinking.

C: Channel variables

The choice of medium or channel is also important in persuasive communication. The answer to this question depends on the budget, the audience, the message and the target behaviours.

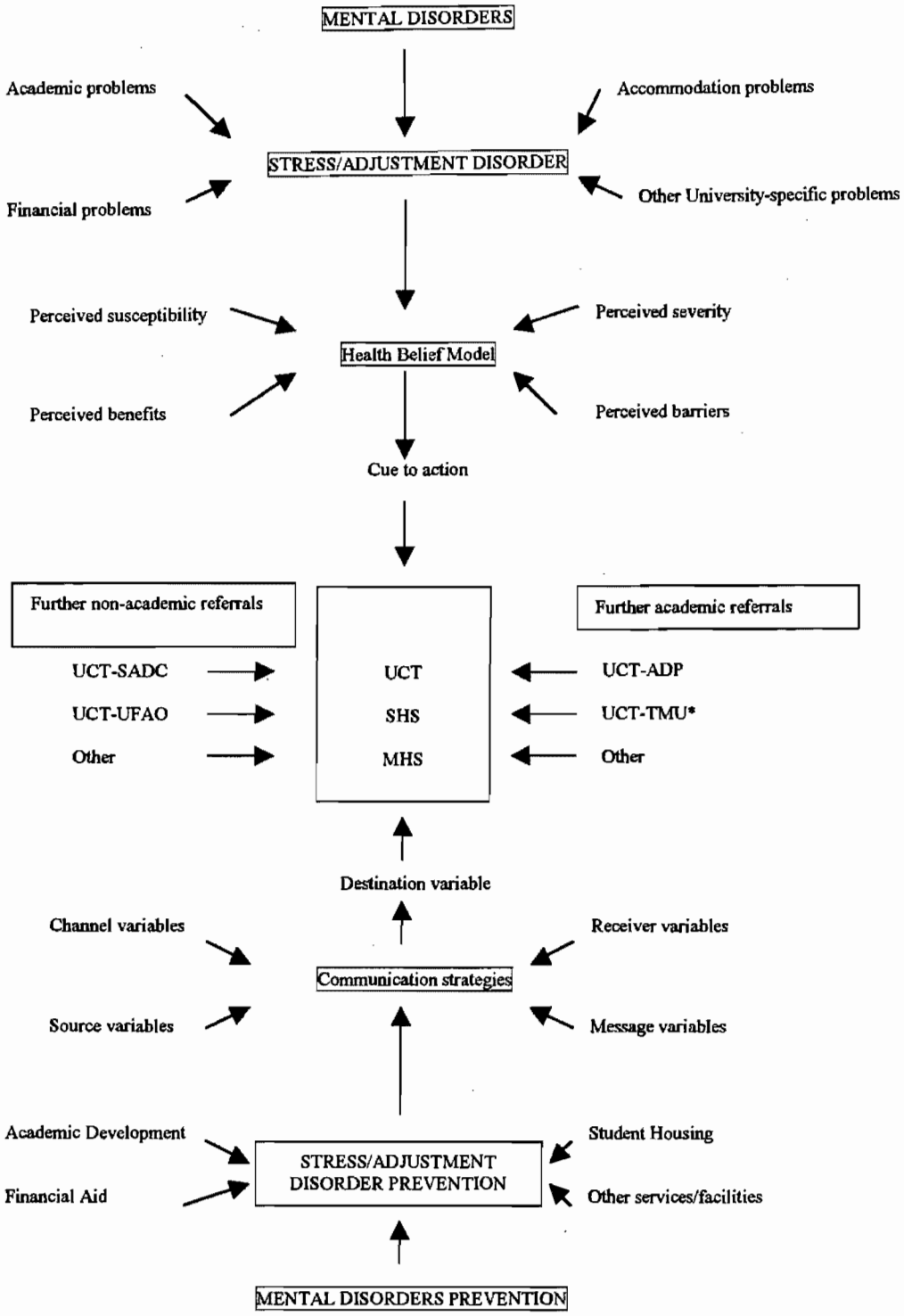
D: Receiver variables

The nature of the intended audience determines all the other factors in the formula for developing persuasive communication. All the other variables depend heavily on the receiver. Learning as much as possible about the current and relevant knowledge, attitudes and practices of the intended receivers cannot be overemphasised. Theoretically, everyone is susceptible to some appeals.

E: Destination variables

The destination, outcome, or extent and type of change desired are obviously very important in persuasive communication. Some actions are more difficult to influence than others. Specific, divisible, reversible effects are more easily targeted than ones that are more general. Certain messages would be more effective for certain outcomes.

(iv) **Figure A.13** Schematic diagram of relationship between stress, Health Belief Model, communication strategies and prevention.



APPENDIX XI

Discarded objectives and results – additional material to that appearing in sections 1.4 and 5.1.

(a) Discarded objectives from Chapter 1

(b) Discarded results from Chapter 5

This appendix functions to detail objectives (refer to section 1.4.2) and results (refer to Chapter 5) that were initially included in the UCT-SHS study. However this material had to be subsequently discarded due to a variety of methodological constraints that either adversely affected the collection, collation or analysis of the data required in order to produce results to fulfil these additional objectives or the suitability and/or applicability of these additional results to the existing specific objectives of this study. Reasons for the non-inclusion of these new objectives related to: (i) incomplete Student Advice and Development Centre (UCT-SADC) records; (ii) the absence of a single centralised database for academic records, and (iii) the lack of uniformity of patient clinical records. Reasons for the omission of these additional results include: (i) their questionable relevance and applicability to the circumstances and design of the UCT-SHS study; (ii) concern about the completeness of resident therapist diagnoses; (iii) the comparatively short duration (three years) of the study period for determining time-specific trends in attendance patterns at the UCT-SHS-MHS; (iv) the relatively low number of patients (N=932) for assessing seasonal variations in student presentations at the UCT-SHS-MHS, and (v) the current volume of results detailing the nine selected demographic, academic, residential (home address) and financial assistance variables (ten if the combined race/population group and gender-specific variable is considered) as well as the associated clinical/diagnostic variable appearing in Chapter 5. Nevertheless, despite these constraints, this material forms a useful adjunct to that appearing in the main body of this work. The discarded objectives, constraints permitting, represent a potential source of future research that could be conducted by relevant University authorities (also refer to section 6.4.3).

APPENDIX XIa

Discarded Objectives from Chapter 1

This section details objectives that were initially included in the specific objectives of the UCT-SHS study (refer to section 1.4.2 for further details). However, the candidate was subsequently obliged to discard these additional proposed objectives due to various methodological constraints (refer to section 6.1.2 for an outline of general constraints and limitations affecting this study) that adversely affected the collection, collation or analysis of the data required in order to fulfil them. These discarded objectives relate to the possible relationship between Student Advice and Development Centre (UCT-SADC) and Student Health Service Mental Health Services (UCT-SHS-MHS) attendees, the influence (if any) of the UCT-SHS-MHS on the academic performance of attendees and additional social and familial details relating to students presenting at the UCT-SHS-MHS. The results that would have been derived from the analysis of a complete and/or valid data source would have, in turn, substantially added to scope and utility of the UCT-SHS study.

(i) Relationship between Student Advice and Development Centre (UCT-SADC) and Student Health Service Mental Health Services (UCT-SHS-MHS) attendees

A: Outline and function

One of the additional stated objectives initially included in the specific objectives of the UCT-SHS study was to characterise UCT-SADC attendees according to the same demographic, academic, residential (home address) and financial assistance variables that have been employed to characterise UCT-SHS-MHS attendees (refer to section 4.3 for a detailed description of the individual subcategories of these variables as well as section 5.1 for the attendee-specific results) as well as possible additional problem-orientated variables employed by the UCT-SADC (the equivalent of the clinical/diagnostic-specific variables employed for UCT-SHS-MHS attendees).This descriptive and analytic data would have assessed the magnitude and nature (viz. according to student attendee characteristics) of social problems and/or mental disorders presenting at both the UCT-SADC and the UCT-SHS-MHS. This data would have compared the attendee-specific profile of both of these Student Development and Services Department (UCT-SDSD) student service-orientated facilities and note whether certain subsets of students were indeed inclined to preferentially use either of these services. Relevant University authorities believe that the UCT-SADC attracts a predominantly Black student clientele whereas the UCT-SHS-MHS caters largely to the needs of White students (the results detailed in section 5.1.1.2 would appear to at least partially confirm the latter observation – although race/population group-specific usage/utilisation rates demonstrate that Black (especially African) students report a considerably higher figure than their White peers). In addition, it would have been of especially informative to assess which students used both of these services – for both administrative purposes in order to assist both of these student service-orientated facilities to more adequately address the obviously diverse needs of this particular group of students as well as constituting an

exploratory study into the probable link between the presence of social and/or financial complaints (the major focus of the UCT-SADC is to provide historically disadvantaged Black students with advice concerning such problem areas – refer to Appendix IXa for further details) and the development of psychological and psychiatric complaints requiring evaluation and/or therapeutic intervention at the UCT-SHS-MHS in students attending the University of Cape Town.

B: Methodological constraints

The candidate, upon requesting details of UCT-SADC (then the Student Advice Office – UCT-SAO) attendees between January 1991 and December 1993 (the study period for the UCT-SHS study), was informed by the erstwhile Co-ordinator that her department did not maintain comprehensive records of student attendees who requested advice for various non-academic problems. Consequently the client list provided for 1993 (the only year for which any records were retained) was, by definition, incomplete – especially as it was found to consist of less than 90 student registration numbers without any accompanying clinical data. This data source, whose integrity was seriously compromised, could not be used either for the accurate analysis of UCT-SAO/SADC utilisation patterns or to provide a valid comparison to corresponding UCT-SHS-MHS utilisation patterns in terms of selected demographic, academic, residential (home address) and financial assistance variables relating to respective student attendees.

(ii) Relationship (if any) between UCT-SHS-MHS attendance and academic performance

A: Outline and function

A further additional stated objective initially included in the specific objectives of the UCT-SHS study was to document whether there was a relationship between UCT-SHS-MHS attendance and academic performance by employing mid-year and end-of-year examination results. This descriptive and analytic academic performance data would have initially assessed whether poor (or below average) academic achievement is associated with mental disorders requiring evaluation and/or therapeutic intervention at the UCT-SHS-MHS. It would have been routine procedure to characterise students attending the UCT-SHS-MHS with the additional background problem of academic failure in terms of the selected demographic, academic, residential (home address) and financial assistance variables used to characterise overall attendees, major diagnostic categories or individual V-codes (refer to section 4.3 for a detailed description of the individual subcategories of these variables as well as section 5.1 for the attendee and clinical/diagnostic-specific results) to assess (as a subset of the main results) particular factors that may predispose students with mental disorders to academic failure and possible exclusion from the University on academic grounds. Furthermore, this data would also have been able to determine whether UCT-SHS-MHS intervention, inter alia, was responsible for a statistically significant improvement in academic performance by measuring the difference between examination results recorded immediately prior to the student's initial consultation and those reported subsequent to the completion of the therapeutic process (viz. the final consultation).

In a study investigating the relationship between college/university mental health service attendance and subsequent academic performance, Craig (1974) reports that the magnitude (and direction) of change in grade point average (as a marker of the level of academic achievement) after consultation at the student mental health service seem to indicate two broad populations of students who sought psychotherapeutic evaluation and/or intervention: (i) a group of students who were achieving superior grades apparently at a high emotional cost and who, after consultation, dropped down to more average academic performance, and (ii) a group who had originally been achieving average grades but were, apparently, being handicapped by their emotional status such that, after consultation, they experienced a significant increase in academic performance to a superior grade range. Viewed from this perspective, according to the author, a change to lower grades in the first group might be seen as an equally positive outcome of psychiatric intervention as the increase in grades experienced in the latter group. It would have been extremely useful to determine the relative number (and distribution according to the selected demographic, academic, residential (home address) and financial assistance variables employed in this study) of UCT-SHS-MHS attendees who could have been included in these two categories. This finding might have assisted academic planners to network with mental health care professionals and, thereby, coordinate their planning activities to actively promote the well-being of the student community (refer to section 6.3.2 for further details).

B: Methodological constraints

The University does not store student academic records in a central computerised data bank (unlike the Central Admissions Office which houses all student registration details from which the demographic, academic and residential (home address) data employed in this research was obtained – refer to section 4.2.2.2) but, instead, relies upon individual academic departments/faculty offices to maintain their own individual academic records. Consequently, due to the logistics (both time and expense) involved in the collection, collation and processing of these multiple data sets, it is not feasible to employ them to investigate what is essentially an issue that is peripheral to the main study.

(iii) Additional social and familial details of UCT-SHS-MHS attendees

A: Outline and function

A further additional stated objective initially included in the specific objectives of the UCT-SHS study was to collect and collate background social and familial (including, inter alia, parental and sibling) data from the clinical notes of the resident psychologists and psychiatrist. This descriptive and analytic data would have been used to further characterise UCT-SHS-MHS attendees according to these additional social and familial variables. Therefore the description of students presenting at the UCT-SHS-MHS would have extended beyond the selected demographic, academic, residential (home address) and financial assistance variables detailed in Chapter 5. More complex multivariate relationships could have been investigated (refer to

section 5.2 for further details) for both Objective 2 (patients versus controls) and Objective 3 (patients versus the total student community). This could, in turn, have led to a better understanding of the role of social and familial determinants in promoting the development of mental disorders requiring evaluation and/or therapeutic intervention at the UCT-SHS-MHS in certain subsets of students (especially historically disadvantaged Black students who, due to the transformation process currently affecting the University, constitute a special interest group in this study).

B: Methodological constraints

The clinical notes maintained by the resident psychologists and psychiatrist are not of a uniform standard in regard to the inclusion of background social and familial data relating to their individual patients. In several instances, the requisite background social and familial data were missing from these records. Therefore the integrity of this data was seriously compromised so that it could not be used to further characterise UCT-SHS-MHS student attendees.

APPENDIX XIb

Discarded Results from Chapter 5

This section details results that were initially included in Chapter 5 of the UCT-SHS study. However, the candidate was subsequently obliged to exclude these additional results due to methodological considerations relating largely to their suitability for inclusion with the existing results. These discarded results relate to: (i) the epidemiological concepts of attributable risk and attributable fraction; (ii) the mean number of diagnoses (as opposed to consultations) per patient; (iii) individual year of study-specific findings; (iv) month-specific findings to assess seasonal variations in attendance patterns; (v) further stratification of Objective 1 (attendee)-specific and Objective 4 (number of consultations)-specific data according to the resident health care professional (viz. psychologist, psychiatrist or medical officer) performing the psychotherapeutic intervention; (vi) correlation between usage/utilisation rate per 1 000 students (Objective 3 finding) and mean number of consultations per student (Objective 4) employing simple linear regression analysis and scattergrams and, (vii) yet further statistical measures of association (including sensitivity, specificity, positive predictive value and negative predictive value) for Objective 2 (patients versus controls) and Objective 3 (patients versus the total student community)-specific findings.

(i) Attributable risk and attributable fraction

These measures of association can be derived from the respective usage/utilisation rates detailed for the selected demographic, academic, residential (home address) and financial assistance variables (refer to Figure A.14 for further details). The major reason for the non-inclusion of these measures in the Results chapter is related to the clear impossibility of establishing an absolute and indisputable relationship between the different demographic, academic, residential (home address) and financial assistance variables and psychological or psychiatric complaints presenting for evaluation and/or therapeutic intervention at the UCT-SHS-MHS. However, as these measures are often employed in public health-related research, the following brief discussion does attempt to contextualise them in terms of the samples and variables employed in the UCT-SHS study.

A: Attributable risk (risk difference)

Susser (1973) states that attributable risk indicates the absolute incidence (or prevalence in the UCT-SHS study) of a health disorder that can be attributed to the causal factor – in the UCT-SHS study the Research Hypothesis-specific subcategory in the abridged/highly abridged format of each selected variable fulfils the proxy role of a causal factor. This measure is derived by subtracting the incidence/prevalence of the disorder amongst persons not exposed to the causal factor (e.g. male students in the gender-specific variable) from its incidence/prevalence amongst persons who are exposed (e.g. female students in the gender-specific variable). The author notes that the usefulness of attributable risk in assessing strength of association is

lessened by the fact that it does not measure closeness of association alone as its magnitude depends on the numbers affected by the disorder as well.

B: Attributable fraction

Kelsey, Thompson and Evans (1986) report that the attributable fraction indicates the proportion of disease occurrence that would potentially be eliminated if exposure to the risk factor (e.g. male students – refer above) were prevented, provided that the association between risk factor and the disease represents a causal relationship – this is clearly an impossible task within the context of the UCT-SHS study although the Literature Review has endeavoured to establish a causal relationship between each of the Research Hypothesis-specific subcategories in the abridged/highly abridged format of each selected variable and the development of mental disorders requiring evaluation and/or therapeutic intervention at the UCT-SHS-MHS. The attributable fraction may be calculated either for exposed individuals only or for the population (total student community) as a whole.

– Attributable fraction for the exposed

Kelsey, Thompson and Evans (1986) define the attributable fraction/proportion for the exposed (viz. students registered at the University of Cape Town during the study period) as the excess disease occurrence associated with the risk factor (e.g. female students – refer above), expressed as a percentage of the total disease occurrence for those exposed to the risk factor. Alternatively, Elwood (1988) states that this measure is the proportion of disease in those exposed to the risk factor when the attributable risk is divided by the total risk in those exposed to the causative factor. This measure can be expressed as follows:

$$\frac{(\text{Rate for the exposed}) - (\text{Rate for the unexposed})}{\text{Rate for the exposed}}$$

(Refer to above comments relating to the clear impossibility of establishing an absolute and indisputable causal relationship between the different demographic, academic, residential (home address) and financial assistance variables and psychological or psychiatric complaints presenting at the UCT-SHS-MHS).

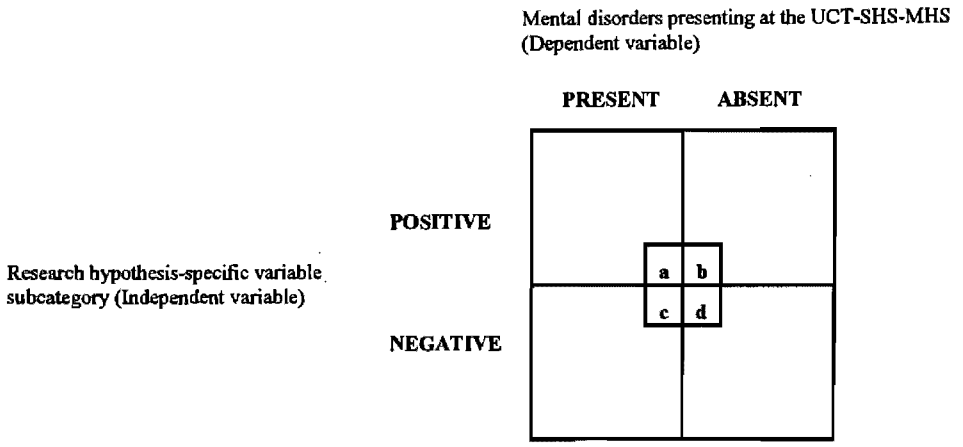
– Attributable fraction for the population

Miettinen (1974) defines the aetiological fraction as the proportion of all cases (viz. students attending the UCT-SHS-MHS during the study period) in the target population (viz. students registered at the University of Cape Town during the study period) attributed to exposure (e.g. female students – refer above). This measure can be expressed as follows:

$$\frac{(\text{Rate for the entire population}) - (\text{Rate for the unexposed})}{\text{Rate for the entire population}}$$

(Again refer to above comments relating to the clear impossibility of establishing an absolute and indisputable causal relationship between the different demographic, academic, residential (home address) and financial assistance variables and psychological or psychiatric complaints presenting at the UCT-SHS-MHS).

Figure A.14 Schematic diagram illustrating how attributable risk, attributable fraction for the exposed and attributable fraction for the population for UCT-SHS-MHS attendees within students registered at UCT (total student community) are calculated.



$$\text{Attributable risk} = \left(\frac{a}{a+c}\right) - \left(\frac{b}{b+d}\right)$$

$$\text{Attributable fraction for the exposed} = \frac{\left(\frac{a}{a+c}\right) - \left(\frac{b}{b+d}\right)}{\left(\frac{a}{a+c}\right)}$$

$$\text{Attributable fraction for the population} = \frac{\left(\frac{a+b}{a+b+c+d}\right) - \left(\frac{b}{b+d}\right)}{\left(\frac{a+b}{a+b+c+d}\right)}$$

C: Results – attributable risk and attributable fraction for selected variables

Table A.38 demonstrates that, for UCT-SHS-MHS attendees between January 1991 and December 1993, the mean attributable risk is 30,3 per 1 000 students, the mean attributable fraction for the exposed is 0,490 (or 49,0 per cent) and the mean attributable fraction for the population is 0,260 (or 26,0 per cent) according to the selected demographic, academic, residential (home address) and financial assistance variables employed in this study.

Attributable risk reports major deviations from the mean (greater than 20,0 per cent or 6,1) for the variables of age (where there was a 49,2 per cent decrease for students who are less than 25 years of age relative to students who are greater than or equal to 25 years of age), language (where there was a 27,4 per cent decrease for non-English first language speaking students relative to English first language speaking students), faculty (where there was a 35,0 per cent increase for Arts, Music and Social Science and Humanities faculty students relative to non-Arts, Music and Social Science and Humanities faculty students), year of study (where there was a 36,3 per cent decrease for first year (freshman/fresher) students relative to non-first (02 to 05) year students), residence (home address) (where there was a 30,4 per cent decrease for students whose home address is outside metropolitan Cape Town relative to students whose home address is within metropolitan Cape Town) and financial assistance (where there was a 123,4 per cent increase for students who are receiving UCT-administered financial aid relative to students who are either ineligible for or not receiving UCT-administered financial aid).

Attributable fraction for the exposed reports major deviations from the mean (greater than 20,0 per cent or 0,098) for the variables of age (where there was a 28,6 per cent decrease for students who are less than 25 years of age relative to students who are greater than or equal to 25 years of age), faculty (where there was a 21,8 per cent increase for Arts, Music and Social Science and Humanities faculty students relative to non-Arts, Music and Social Science and Humanities faculty students), level of study (where there was a 29,4 per cent increase for undergraduate students relative to postgraduate students), year of study (where there was a 22,2 per cent decrease for first year (freshman/fresher) students relative to non-first (02 to 05) year students) and financial assistance (where there was a 38,2 per cent increase for students who are receiving UCT-administered financial aid relative to students who are either ineligible for or not receiving UCT-administered financial aid).

Attributable fraction for the population reports major deviations from the mean (greater than 20,0 per cent or 0,052) for the variables of language (where there was a 48,8 per cent decrease for non-English first language speaking students relative to English first language speaking students), level of study (where there was a 103,5 per cent increase for undergraduate students relative to postgraduate students), year of study (where there was a 23,5 per cent decrease for first year (freshman/fresher) students relative to non-first (02 to 05) year students) and financial assistance (where there was a 34,2 per cent decrease for students who are receiving UCT-administered financial aid relative to students who are either ineligible for or not receiving UCT-administered financial aid).

Therefore, in summary, only one variable (year of study) recorded values for all three measures that were greater than 20 per cent below the mean values reported while two further variables (age and language) documented values for two out of the three measures that were greater than 20 per cent below the mean values recorded. On the other hand, three variables (faculty, level of study and financial assistance) reported values for two out of the three measures that were greater than 20 per cent above the mean values recorded –

although financial assistance also documented a result (attributable fraction for the population) that was greater than 20 per cent below the mean value reported.

Table A.38 Attributable risk, attributable fraction for the exposed and attributable fraction for the population for selected demographic, academic, residential (home address) and financial assistance variables.

Variable	Attributable risk per 1 000 students	Attributable fraction for the exposed	Attributable fraction for the population
Gender (female students)	6,4	0,485 (or 48,5 per cent)	0,284 (or 28,4 per cent)
Race/population group (Black students)	8,0	0,481 (or 48,1 per cent)	0,227 (or 22,7 per cent)
Age (students less than 25 years of age)	5,4*	0,350 (or 35,0 per cent)*	0,269 (or 26,9 per cent)
Language (non-English first language speaking students)	2,0*	0,394 (or 39,4 per cent)	0,133 (or 13,3 per cent)*
Faculty (Arts, Music and Social Science and Humanities faculty students)	0,9**	0,597 (or 59,7 per cent)**	0,294 (or 29,4 per cent)
Level of study (Undergraduate students)	1,9	0,634 (or 63,4 per cent)**	0,529 (or 52,9 per cent)**
Year of study (first year (freshman/fresher) students)	9,3*	0,381 (or 38,1 per cent)*	0,199 (or 19,9 per cent)*
Residence (home address) (students whose home address is outside metropolitan Cape Town)	1,1*	0,413 (or 41,3 per cent)	0,233 (or 23,3 per cent)
Financial assistance (students who are receiving UCT-administered financial aid)	7,7**	0,677 (or 67,7 per cent)**	0,171 (or 17,1 per cent)

* Greater than 20 per cent below the mean value.
** Greater than 20 per cent above the mean value.

D: Discussion – attributable risk and attributable fraction for selected variables

The variable-specific results that are important are those that report values for either attributable risk, attributable fraction for the exposed and attributable fraction for the population that are greater than 20 per cent above the mean. In the case of attributable risk, these variables are faculty and financial assistance whose abridged/highly abridged format subcategories produce widely divergent usage/utilisation rates. Therefore Arts, Music and Social Science and Humanities faculty students (Research Hypothesis V) and students who are receiving UCT-administered financial aid (Research Hypothesis IX) are considerably more likely to use the UCT-SHS-MHS than their peers. Possible reasons for these findings have already been discussed in sections 6.2.3.1(c) and 6.2.5.3, respectively.

In the case of attributable fraction for the exposed, these variables are faculty, level of study and financial assistance. This result is largely dependent on the usage/utilisation rate recorded by the exposed (viz. the subcategory subject of the variable-specific Research Hypotheses – with the exception of age where Research Hypothesis III was clearly rejected) as it appears in both the numerator and the denominator of this measure (refer to Figure A.14 above). (Refer to cross references for attributable risk, above, as well as section 6.2.3.2(c) for further details concerning possible reasons for the raised usage/utilisation rates reported for Arts, Music and Social Science and Humanities faculty students, undergraduate students and students receiving UCT-administered financial aid).

In the case of attributable fraction for the population, the variable is level of study. This result, unlike the example of attributable risk, is largely dependent on the usage/utilisation rate recorded by the unexposed (viz. the subcategory object of the variable-specific Research Hypotheses – with the exception of age where Research Hypothesis III was clearly rejected) as it appears in the numerator of this measure (refer to Figure A.14 above). Possible reasons to explain the fairly low usage/utilisation rate recorded by postgraduate students have already been discussed in section 6.2.3.2 – refer to Pinkerton (1994) who highlights issues such as unwillingness to seek help and a greater use of denial in these students.

The seemingly anomalous result obtained for the variable of financial assistance whereby it records an attributable risk that is greater than 20 per cent above the mean value associated with an attributable fraction for the population that is greater than 20 per cent below the mean value can most likely be explained by the comparatively low number of students who are receiving UCT-administered financial aid within the total student community (i.e. the unusually high usage/utilisation rate that is employed to calculated the attributable fraction for the population is derived from a low denominator).

E: Concluding comments

Kelsey, Thompson and Evans (1986) observe that the choice between ratio measures of association (i.e. attributable fraction for the exposed and attributable fraction for the population) and difference measures (i.e. attributable risk) is seldom clear-cut. For purposes of public policy decision making, the difference measures may be more useful in that they permit direct calculation of "excess" occurrences of the disease that are associated with exposure. On the other hand, ratio measures may be preferable when disease aetiology is being studied because they contribute to the assessment of the plausibility that an observed association is an artefact of the confounding effects of another risk factor that might be correlated with the exposure of interest.

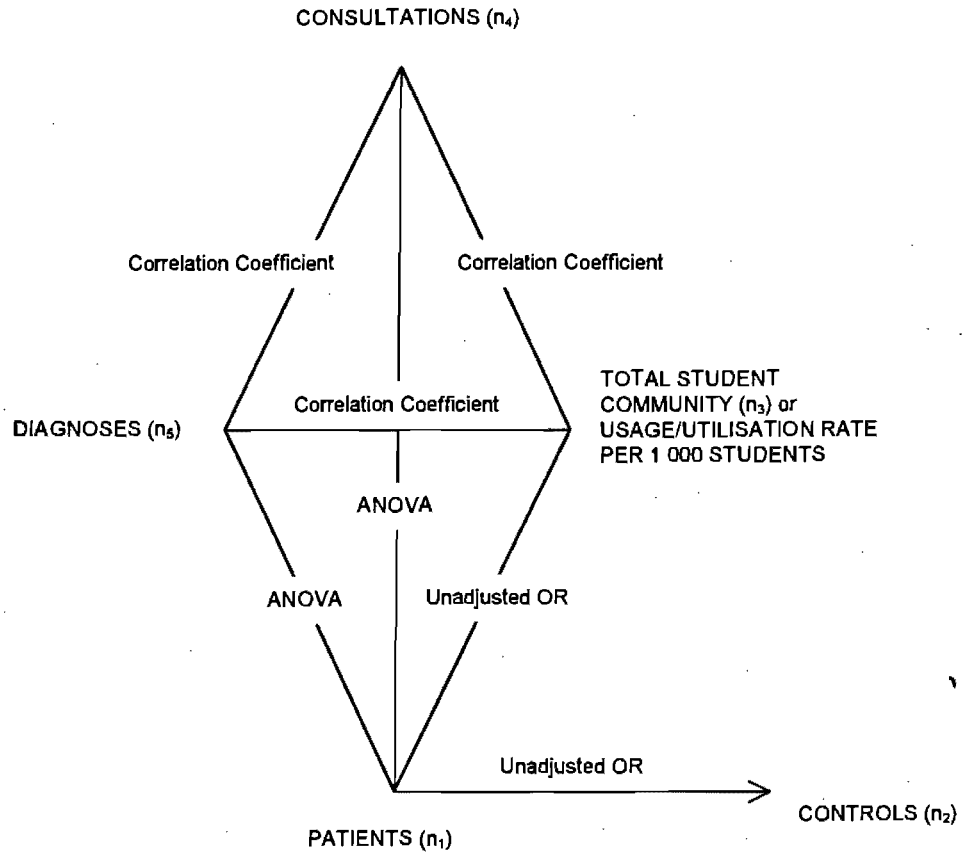
(ii) Mean number of diagnoses per patient

The mean number of diagnoses per patient is an additional patient-specific measurement (with direct clinical/diagnostic-specific implications) that was initially considered for inclusion within the selected demographic, academic, residential (home address) and financial assistance-specific results. This measure could alternatively be expressed as the mean number of consultations per patient (Objective 4) multiplied by the mean number of diagnoses per consultation (another potentially useful statistic). It could have been used to assess the number of individual complaints affecting various subsets of students - for example, whether historically disadvantaged and educationally underprepared Black students presented at the UCT-SHS-MHS with a greater number of mental disorders than their generally advantaged and educationally prepared White peers. However, this measure is affected not only by the diagnostic skills of the resident psychologists, psychiatrist and, where appropriate medical officers but also by the thoroughness of these professionals in

recording their diagnoses on their "Patients Stat Details Sheets". It is possible (even probable) that resident therapists have conferred a greater number of diagnoses to selected subsets of students (e.g. White students as the predominantly White therapists would be au fait with the classical presentation of common psychological complaints in these students) and a correspondingly lower number of diagnoses in other subsets of students (e.g. Black (especially rural African) students as these therapists would, on the other hand, find considerable difficulty in recognising culture-specific presentation of various mental disorders in such students). There is therefore a strong possibility that these findings would be biased insofar as they could differ systematically from the truth (refer to section 6.1.2 for further details). Consequently it would not only be extremely difficult (and methodologically unsound) to suggest a meaningful interpretation of these results but it would also be unethical to propose specific recommendations to relevant University authorities that are based upon a flawed data set.

Figure A.15 below illustrates the full range of interobjective-specific relationships that could have been investigated for the selected demographic, academic, residential (home address) and financial assistance variables if the mean number of diagnoses (proposed n_5) per patient had been investigated in the UCT-SHS study. Correlation coefficients could have been obtained for the relationships existing between: (i) mean number of consultations (n_4) and mean number of diagnoses (proposed n_5); (ii) usage/utilisation rates per 1 000 students (Objective 3) and mean number of consultations (n_4) (refer to subdivision (vi) below for further details), and (iii) usage/utilisation rates per 1 000 students (Objective 3) and mean number of diagnoses (proposed n_5) in addition to ANOVAs measuring variations between individual variable-specific subcategories for mean number of consultations and mean number of diagnoses, as well as unadjusted ORs for patients versus controls (Objective 2) and patients versus the total student community (Objective 3). Therefore, as Figure A.15 illustrates, this additional proposed objective would have enabled the calculation of several potentially useful correlations which could have been employed for hypothesis generating purposes. These hypotheses could, in turn, have been further developed and tested in future, more definitive student mental health studies.

Figure A.15 Possible range of interobjective-specific relationships that could have been investigated if mean number of diagnoses (proposed n_5) were included in the UCT-SHS study.



(iii) Year-specific findings

The objective-specific results detailed for the selected demographic, academic, residential (home address) and financial assistance variables could have been further stratified according to the individual years encompassed by the study period (viz. 1991, 1992 and 1993). This would have enabled the assessment of time trends for students attending the UCT-SHS-MHS for the evaluation and/or intervention of psychological or psychiatric complaints. Such data, spanning the early stages of the transformation process currently affecting the University of Cape Town, might have provided relevant University authorities with information concerning the early impact of this process on various subsets of the student community – including the historically disadvantaged Black students who are the beneficiaries of this affirmative action programme. However, three consecutive years (as opposed to three separate years marking the beginning, the middle and the end of a five to nine year study period) constitute too short a period in which to develop a meaningful interpretation of these results. It was consequently decided to omit these potentially interesting results as, in many cases, there were considerable fluctuations between variable subcategories for the individual years. These fluctuations were often characterised by, for example, a high 1991 figure followed by a lower 1992 figure and a somewhat higher 1993 figure. As mentioned above, it would be near impossible to meaningfully relate these findings to, inter alia, the transformation process.

(iv) Month-specific findings

The objective-specific results detailed for the selected demographic, academic, residential (home address) and financial assistance variables could have been yet further stratified according to the month of the individual consultations in order to measure any possible seasonal variation in the prevalence of various mental disorders in students attending the UCT-SHS-MHS for the evaluation and/or intervention of psychological or psychiatric complaints. The rationale for this investigation would be that both monthly attendance and clinical/diagnostic-specific trends could be dependent on factors related to the demands of University life – such as an increase in stress-related disorders associated with mid-year and end-of-year examinations (Jones, 1972. However, Baker, 1964 detected periods of significantly higher usage immediately following the mid-term examinations thereby suggesting that some students may show a delayed response to the stress associated with examinations. Personal observation would tend to refute this particular phenomenon at the UCT-SHS-MHS). These academic factors are probably more relevant to the causation of mental disorders in students attending the UCT-SHS-MHS than other possible bioclimatic factors related to circannual rhythms (e.g. serotonin or melatonin metabolism which affects vulnerability or resistance to both mental and physical stressors). However, these results could be affected by the fact that the UCT-SHS-MHS is often oversubscribed by students (i.e. there is often a circa two week waiting period for students who are judged to constitute non-emergency cases during busy periods as a result of a fairly constant staffing ratio throughout the year despite seasonal peaks in student presentations). Consequently there is a possibility (not nearly as strong as in the case of the mean number of diagnoses per student, above) that these findings would be biased insofar as they too could differ systematically from the truth (refer to section 6.1.2 for further details). Therefore the comments appearing in subheading (ii) concerning the methodological and ethical constraints in producing results and subsequent specific recommendations that are based upon a (possibly) flawed data set applies here. In addition, although 932 patients present a wholly adequate number of subjects for the objective and variable-specific statistical analyses performed in order to meet the requirements of the UCT-SHS study, the average of circa 80 patients per month (with considerably lower numbers during the vacation months of July, December, January and, to a lesser extent, February) would not permit the in-depth analyses performed for the complete three year data.

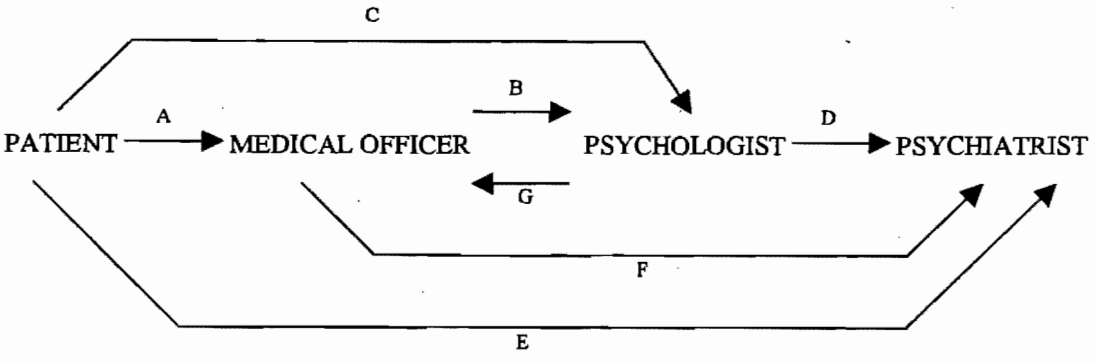
(v) Further stratification of Objective 1 (attendee)-specific and Objective 4 (number of consultations)-specific data

These objective-specific results detailed for the selected demographic, academic, residential (home address) and financial assistance variables could have been yet further stratified according to psychiatrist, psychologist and medical officer consultations conducted at the UCT-SHS-MHS. It would have been possible to compare the profiles and clinical diagnoses of patients who required psychotherapeutic intervention with a psychologist alone versus those patients who were referred (usually by a psychologist) to the resident psychiatrist. These attendees would generally be more severely affected by their presenting

mental disorder and need to be assessed for their suitability for appropriate psychoactive medication (often anti-depressants or anxiolytics). Therefore it might have been useful for relevant University authorities to obtain details concerning the profile of these most vulnerable students who would often (although not necessarily) be most severely incapacitated by their illness so that specific interventive preventive programmes could have been introduced to assist them. In the Literature Review, Frank and Kirk (1976) at the University of California, Berkeley have described attendees of both the Campus Counseling Center and the Psychiatric Service of the Student Health Service while Reinhold (1973) at the University of Pennsylvania compared students presenting at the University Counseling Service – which offered help with academic, vocational, social, personal, emotional and family problems – with those attending the Student Health Service Psychiatric Clinic– which provided psychiatric evaluation and short-term psychotherapy for personal and interpersonal adjustment problems as well as for the more classical psychiatric disorders. In these two developed (first world) universities, the initial student service-orientated facilities would probably be equivalent to the resident UCT-SHS-MHS psychologists (and, possibly, the social workers at the Student Advice and Development Centre (UCT-SADC)) while the latter would, in all likelihood, equate to the resident UCT-SHS-MHS psychiatrist.

In addition, a further elaboration of this stratification of attendee-specific data could have been to introduce a referral tree to analyse the pathway of internal referrals within the UCT-SHS/MHS in order for resident staff to optimise their referral patterns. Figure A.16 represents a schematic diagram of possible internal referrals within the UCT-SHS/MHS – note that it is possible for a student attending the UCT-SHS/MHS to see either one (psychologist only (pathway C) or medical officer only (pathway A) with pathway E (psychiatrist only) being highly improbable due to the need for an internal referral to this specialist), two (any combination of the above) or, occasionally, all three resident mental health care professionals.

Figure A.16 Referral tree of possible internal referrals within the UCT-SHS/MHS.



KEY

C	Psychologist alone
C + D	Psychologist + Psychiatrist
A	Medical Officer alone
A + B/G	Medical officer + Psychologist
A + B/G + D	Medical Officer + Psychologist + Psychiatrist
A + F	Medical Officer + Psychiatrist
E	Psychiatrist alone

However, in view of the current volume of results detailing the nine selected demographic, academic, residential (home address) and financial assistance variables (ten if the combined race/population group and gender-specific variable is considered) as well as the associated clinical/diagnostic variable appearing in Chapter 5, it was felt that this additional material, however meritorious, would excessively prolong an already long work. Nevertheless, as stated above, this material could be most useful to relevant University authorities (including those at the UCT-SHS-MHS) and should, consequently, be explored in the foreseeable future. (Also refer to section 6.4.3 for details of further research that could/should be conducted within the University of Cape Town in order to improve student well-being).

(vi) Correlation between usage/utilisation rate per 1 000 students and mean number of consultations per student

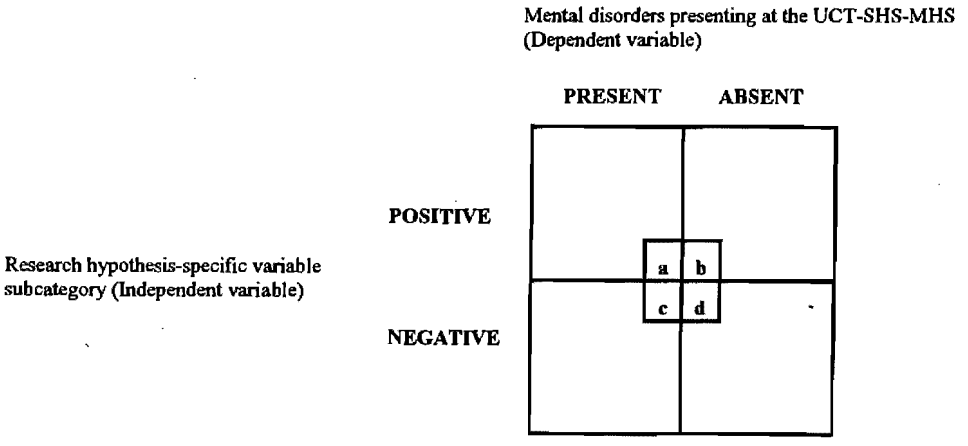
It was felt that it would be useful to investigate for the selected demographic, academic, residential (home address) and financial assistance variables whether a relationship (either positive or negative) exists between the usage/utilisation rate per 1 000 students recorded in Objective 3 and the mean number of consultations per student reported in Objective 4. The statistical techniques to be employed for this proposed analysis of non-abridged format results would have required simple linear regression with the production of correlation coefficients and the use of scattergrams. This analysis, which does not appear to have been reported in the relevant student mental health literature, would possibly have provided important exploratory data which could have been further investigated in a more definitive study. However, again in view of the current volume of results detailing the nine selected demographic, academic, residential (home address) and financial assistance variables (ten if the combined race/population group and gender-specific variable is considered) as well as the associated clinical/diagnostic variable appearing in Chapter 5, it was decided not to include this fairly detailed (and page intensive) data in this chapter. Instead this subject has been briefly pursued in Chapter 6 where any similarity or discrepancy in the ordinal position of the respective non-abridged format variable subcategories for usage/utilisation rate and mean number of consultations, respectively, is discussed. Alternatively, in the abridged/highly abridged (for age and residence (home address) format), a sentence notes whether there is or is not an association between these two measures for the Research Hypothesis-specific subcategories.

(vii) Yet further statistical measures of association

Yet further statistical measures of association (including sensitivity, specificity, positive predictive value and negative predictive value) could have been included in the Objective 2 (patients versus controls) and Objective 3 (patients versus the total student community)-specific results for the selected demographic, academic, residential (home address) and financial assistance variables appearing in Chapter 5 (refer to Figure A.17). However, as these results were never intended to fulfil the role of a screening tool

(methodological constraints including the lack of generalisability of UCT-SHS "Patients Stat Details Sheet" data to community-based student disease patterns – refer to section 6.1.2.2(a) for further details – preclude such an option), it was decided that these measures of association do not constitute appropriate statistical analyses to fulfil the requirements of these objectives. Furthermore, using the demographic variable of gender as an example, the individual sensitivity, specificity, positive predictive value and negative predictive value for Objective 2 (0,42; 0,43; 0,25 and 0,61, respectively) and Objective 3 (0,42; 0,42; 0,03 and 0,95, respectively) prove that this variable (as well as the vast majority of the other variables) are not suitable, in this basic numerical format, for the compilation of a screening tool. The comparatively small number of UCT-SHS-MHS attendees relative to the total student community, in Objective 3, is responsible for the extremely low positive predictive value recorded.

Figure A.17 Schematic diagram illustrating how sensitivity, specificity, positive predictive value, negative predictive value, pretest probability, posttest probability, prior odds and posterior odds of UCT-SHS-MHS attendees (patients) versus UCT-SHS attendees who do NOT present at the UCT-SHS-MHS (controls) and students registered at UCT (total student community) are calculated.



$$\text{Sensitivity} = \left(\frac{a}{a+c}\right)$$

$$\text{Specificity} = \left(\frac{d}{d+b}\right)$$

$$\text{Positive predictive value} = \left(\frac{a}{a+b}\right)$$

$$\text{Negative predictive value} = \left(\frac{d}{c+d}\right)$$

$$\text{Pretest probability} = \left(\frac{a+c}{a+b+c+d}\right)$$

$$\text{Posttest probability} - \text{Row a/b} = \left(\frac{a}{a+b}\right) \quad \text{(refer to positive predictive value)}$$

$$- \text{Row c/d} = \left(\frac{d}{c+d}\right) \quad \text{(refer to negative predictive value)}$$

$$\text{Prior odds} = \left(\frac{a+c}{b+d}\right) \times \left(\frac{\text{Pretest probability}}{1 - \text{Pretest probability}}\right)$$

$$\text{Posterior odds} = \left(\frac{\text{Sensitivity}}{1 - \text{Specificity}}\right) \times (\text{Prior odds})$$

APPENDIX XII

Schematic diagrams demonstrating the interrelationship between the UCT-SHS, the student community and mental disorders presenting at the UCT-SHS-MHS.

(a) SWOT analysis

(b) Position and functioning of the UCT-SHS

(c) Composite diagram

This appendix contains schematic flow-diagrams which serve both as an extension to the material previously presented in the review of the University of Cape Town as well as an adjunct to details outlined in the Rationale section of Chapter 1. These diagrams review various demographic, academic, residential (home address) and financial assistance determinants that potentially impact upon student mental health thereby leading to psychological or psychiatric complaints presenting at the UCT-SHS-MHS. They are constructed in a progressive sequence insofar as the basic concepts that are initially presented are subsequently expanded into a more comprehensive framework. Appendix XIIa is a SWOT analysis which combines a summary list of the above determinants with, inter alia, a corresponding list of selected student service-orientated facilities offered by the University. Appendix XIIb highlights the position and functioning of the UCT-SHS within the total student community. Appendix XIIc completes this sequence by incorporating this data into a composite diagram which provides a broad outline of the rationale behind this study.

APPENDIX XIIa

SWOT analysis

Figure A.18, which is in the form of a SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis, illustrates various predisposing and enabling factors that could either negatively impact on or positively influence student mental health.

Predisposing factors could include adverse demographic, including socio-economic, factors (which, in turn, could include being an historically disadvantaged Black student), academic conditions that could lead to certain stress-related complaints, residential conditions (including University-administered residences possibly being inclined to accommodate out-of-town students affected by various psychological or psychiatric complaints requiring evaluation and/or therapeutic intervention at the UCT-SHS-MHS) and financial assistance conditions such as, being either eligible for or the recipient of a large University loan. These conditions, which could act as predisposing factors or weaknesses leading to certain mental disorders presenting at the UCT-SHS-MHS, have been investigated in this research work as a series of selected demographic, academic, residential (home address) and financial assistance variables. These, in turn, have been analysed according to appropriate statistical techniques.

Enabling factors should include the facilities offered by the UCT-SHS (including nursing sisters, medical officers, psychologists and a psychiatrist, who are experienced in evaluating and treating students affected by various medical and/or mental health problems) and the UCT-SADC (Student Advice and Development Centre) which includes basic advice and counselling services for non-academic problems. In addition, the UCT-ADP (Academic Development Programme) and various tutor schemes which function to assist educationally underprepared students from disadvantaged backgrounds should function to substantially reduce academic-related stress amongst those students who are prepared to fully utilise these services. The UCT-UFAO (Undergraduate Financial Aid Office) and UCT-SHO (Student Housing Office) should be able to assist students who are either in financial difficulty (and consequently unable to meet pressing day-to-day commitments) or without suitable accommodation while attending University – there should be a substantial reduction in potentially preventable stress-related complaints consequent to the alleviation of these socio-economic and social stressors.

Opportunities and Threats would include student attitudes to mental health problems which are often negative and the nature and quality of student health education programmes instituted by the University. Any steps to make counselling services more accessible to all students should serve to reduce both the incidence and severity of psychological and/or psychiatric problems affecting University students. It is important that students should feel comfortable in utilising these services which must be both confidential and non-judgemental.

There may be other factors which are relevant to this SWOT analysis that may become apparent only once this study has been completed and the results thereof become available to relevant University authorities.

Figure A.18 Mental health morbidity affecting students at the University of Cape Town (as measured by psychological and/or psychiatric complaints presenting at the UCT-SHS-MHS) – SWOT analysis.

– Demographic conditions/determinants – Academic conditions/determinants – Residential conditions/determinants – Financial assistance conditions/determinants	Predisposing Factors (Weaknesses)
– Student Health Services expenditure/facilities – Student Advice Services expenditure/facilities – Student Academic Services expenditure/facilities – Student Financial Assistance expenditure/facilities – Student Housing Services expenditure/facilities	Enabling Factors (Strengths)
– Student health education – Student attitudes	Opportunities/ Threats
– ? – ?	Other
APPLICATIONS	

APPENDIX XIIb

Position and functioning of the UCT-SHS

Figure A.19, which expands upon the SWOT analysis detailed in Appendix XIIa, illustrates the relationship that exists between the student community, the variables investigated in this study, the UCT-SHS and other University referral centres that send students to the UCT-SHS-MHS for specialised evaluation and/or therapeutic intervention.

The UCT student community consists of a demographic profile which is significantly different to that of the attendees of the UCT-SHS-MHS. This community has its own individual mental and physical health status which cannot be specifically measured by attendance figures at the UCT-SHS-MHS and the UCT-SHS, respectively, as several students will seek medical, psychological and psychiatric attention from health care facilities/providers outside of the UCT-SHS or the UCT-SHS-MHS. UCT-SHS-MHS attendance figures are, therefore, not representative of the total student community. In addition, the University environment exerts unequal pressures on the different subsets of the student community as they are forced to adjust to the various demands of University life. Clinical observation suggests that the historically and educationally disadvantaged Black student often finds this adjustment more traumatic than their generally historically advantaged White peer – this observation being confirmed by personal communications from the UCT-ADP.

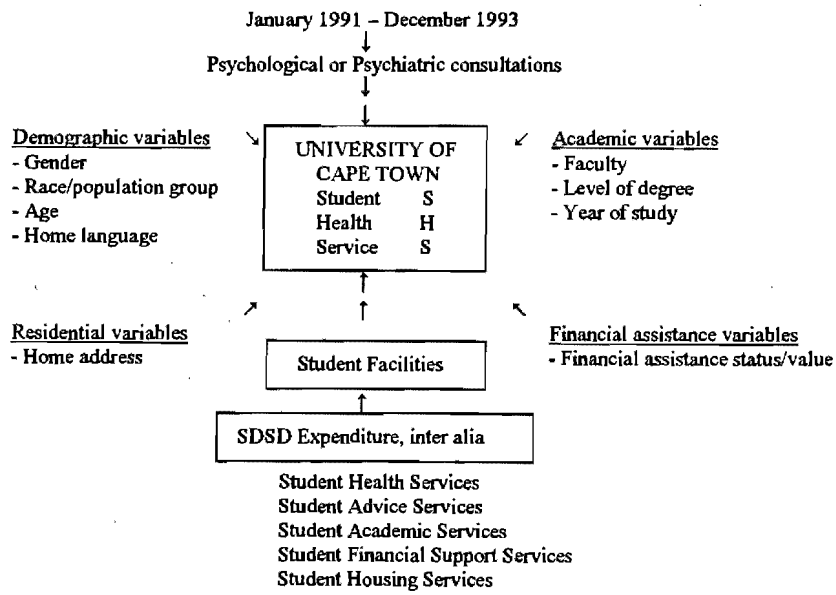
The various demographic, academic, residential (home address) and financial assistance variables investigated in this study are separately highlighted. The potentially predisposing nature of these variables has been previously outlined above in the preceding SWOT analysis. These variables have been employed, inter alia, to either confirm or reject stated research hypotheses that certain subsets of students (as defined according to each of these variables) are more inclined to certain mental disorders presenting as psychological or psychiatric complaints at the UCT-SHS-MHS.

The various services offered to students by the UCT-SHS are also separately highlighted. The psychologist and psychiatrist as well as psychologically and/or psychiatrically orientated medical officer consultations constitute the main sample of this study. Student health education programmes instituted from either the UCT-SHS, UCT-SHS-MHS or other student service-orientated facilities (will) constitute the mainstay of preventive mental health care programmes. These programmes should function to encourage students who are either at risk of developing or already suffering the effect of various mental disorders to utilise the UCT-SHS-MHS for evaluation and/or therapeutic intervention.

The various internal University referral centres to and from the UCT-SHS consist of, inter alia, the UCT-SADC, the UCT-UFAO and the UCT-TMU (Director: Professor J.H.F. Meyer, until disbandment in December 1995). It is important that the different University departments and student service-orientated facilities, including the UCT-SHS are able to communicate effectively with each other to optimise the

treatment/management of the individual students who utilise more than one of these facilities. Ineffective channels of communication would be extremely disadvantageous to student care and could lead to severe problems (including stress-related mental health problems) if presenting academic or financial, inter alia, problems are not relayed to all appropriate and relevant University authorities associated with the individual student concerned.

Figure A.19 Position and functioning of the UCT-SHS within the student community.



APPENDIX XIIc

Composite diagram

Figure A.20, which yet further expands upon the contents of Appendix XIIa and Appendix XIIb, illustrates a broad outline of the rationale of this study by linking it to the data required in order to meet the previously stated objectives. The demographic, academic, residential (home address) and financial assistance variables employed in this study are redefined here. These variables have been obtained for all students presenting with psychological or psychiatric complaints at the UCT-SHS-MHS from 1 January 1991 to 31 December 1993. This data has been analysed in Objectives 2 and 3 in order to either confirm or reject the stated research hypotheses relating to certain subsets of students (also refer to Appendix XIIb).

UCT-SDSD (Student Development and Services Department) expenditure on their student service-orientated facilities, including the UCT-SHS and the UCT-SADC is highlighted. The level of student-orientated assistance and care delivered by these facilities is highly dependent on the UCT-SDSD budget – recent cuts in funding have strained the capacity of these facilities to optimally cope with various relevant student-related problems. Conversely, if increased funding were to be obtained, these facilities would be able to deliver a more broad-based and preventive-orientated service that could pre-empt the occurrence of severe mental (health) problems which often present around examination time (personal observation).

Figure A.20 Composite diagram to provide a broad outline of the rationale of the UCT-SHS study.